

WO 01/53312

PCT/US00/34263

| SEQ ID NO: of full- length nucleotide sequence | SEQ ID NO: of full- length peptide sequence | SEQ ID NO: of contig nucleotide sequence | SEQ ID NO: of contig peptide sequence | Priority docket number_ corresponding SEQ ID NO: in priority application | SEQ ID NO: in U.S.S.N. 09/488,725 |
|--|--|---|---|---|--|
| 1734 | 3520 | 5306 | 7092 | 784CIP2D_82 | 9867 |
| 1735 | 3521 | 5307 | 7093 | 784CIP2D_83 | 10010 |
| 1736 | 3522 | 5308 | 7094 | 784CIP2D_84 | 10011 |
| 1737 | 3523 | 5309 | 7095 | 784CIP2D_85 | 10052 |
| 1738 | 3524 | 5310 | 7096 | 784CIP2D_86 | 10057 |
| 1739 | 3525 | 5311 | 7097 | 784CIP2D_87 | 10085 |
| 1740 | 3526 | 5312 | 7098 | 784CIP2D_89 | 10139 |
| 1741 | 3527 | 5313 | 7099 | 784CIP2D_90 | 10142 |
| 1742 | 3528 | 5314 | 7100 | 784CIP2D_92 | 10165 |
| 1743 | 3529 | 5315 | 7101 | 784CIP2D_93 | 10173 |
| 1744 | 3530 | 5316 | 7102 | 784CIP2D_94 | 10173 |
| 1745 | 3531 | 5317 | 7103 | 784CIP2D_95 | 10273 |
| 1746 | 3532 | 5318 | 7104 | 784CIP2E_1 | 3121 |
| 1747 | 3533 | 5319 | 7105 | 784CIP2E_2 | 3628 |
| 1748 | 3534 | 5320 | 7106 | 784CIP2E_4 | 3673 |
| 1749 | 3535 | 5321 | 7107 | 784CIP2E_5 | 4018 |
| 1750 | 3536 | 5322 | 7108 | 784CIP2E_6 | 4467 |
| 1751 | 3537 | 5323 | 7109 | 784CIP2E_7 | 4865 |
| 1752 | 3538 | 5324 | 7110 | 784CIP2E_8 | 4916 |
| 1753 | 3539 | 5325 | 7111 | 784CIP2E_9 | 4923 |
| 1754 | 3540 | 5326 | 7112 | 784CIP2E_10 | 4926 |
| 1755 | 3541 | 5327 | 7113 | 784CIP2E_11 | 4962 |
| 1756 | 3542 | 5328 | 7114 | 784CIP2E_12 | 4963 |
| 1757 | 3543 | 5329 | 7115 | 784CIP2E_13 | 4964 |
| 1758 | 3544 | 5330 | 7116 | 784CIP2E_14 | 4988 |
| 1759 | 3545 | 5331 | 7117 | 784CIP2E_15 | 5835 |
| 1760 | 3546 | 5332 | 7118 | 784CIP2E_16 | 7682 |
| 1761 | 3547 | 5333 | 7119 | 784CIP2E_17 | 7682 |
| 1762 | 3548 | 5334 | 7120 | 784CIP2E_18 | 7699 |
| 1763 | 3549 | 5335 | 7121 | 784CIP2E_19 | 7707 |
| 1764 | 3550 | 5336 | 7122 | 784CIP2E_20 | 7707 |
| 1765 | 3551 | 5337 | 7123 | 784CIP2E_21 | 7752 |
| 1766 | 3552 | 5338 | 7124 | 784CIP2E_22 | 8357 |
| 1767 | 3553 | 5339 | 7125 | 784CIP2E_23 | 9065 |
| 1768 | 3554 | 5340 | 7126 | 784CIP2E_24 | 9324 |
| 1769 | 3555 | 5341 | 7127 | 784CIP2F_1 | 2976 |
| 1770 | 3556 | 5342 | 7128 | 784CIP2F_2 | 3559 |
| 1771 | 3557 | 5343 | 7129 | 784CIP2F_3 | 4021 |
| 1772 | 3558 | 5344 | 7130 | 784CIP2F_4 | 4474 |
| 1773 | 3559 | 5345 | 7131 | 784CIP2F_5 | 4566 |
| 1774 | 3560 | 5346 | 7132 | 784CIP2F_6 | 4705 |
| 1775 | 3561 | 5347 | 7133 | 784CIP2F_7 | 4707 |
| 1776 | 3562 | 5348 | 7134 | 784CIP2F_8 | 4712 |
| 1777 | 3563 | 5349 | 7135 | 784CIP2F_9 | 5008 |
| 1778 | 3564 | 5350 | 7136 | 784CIP2F_10 | 5009 |
| 1779 | 3565 | 5351 | 7137 | 784CIP2F_11 | 5015 |
| 1780 | 3566 | 5352 | 7138 | 784CIP2F_12 | 5015 |
| 1781 | 3567 | 5353 | 7139 | 784CIP2F_13 | 7724 |
| 1782 | 3568 | 5354 | 7140 | 784CIP2F_14 | 7725 |
| 1783 | 3569 | 5355 | 7141 | 784CIP2F_15 | 8828 |
| 1784 | 3570 | 5356 | 7142 | 784CIP2F_16 | 8830 |
| 1785 | 3571 | 5357 | 7143 | 784CIP2F_17 | 9739 |
| 1786 | 3572 | 5358 | 7144 | 784CIP2F_18 | 9896 |

TRADOC:1416247.1(%CS7011.DOC)

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TABLE 7

| SEQ ID NO: | Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence | Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence | Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E=Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *=Stop Codon, /=possible nucleotide deletion, \=possible nucleotide insertion) |
|------------|--|--|--|
| 5359 | 337 | 1131 | AHLSARLSALILDEVALPAPQNLISVLSTNMKHLMLWSPVIAPE ETVYYSVEYQGEYESLYTSHIWIPSSWSCSLTEGPECVDTDDITA TVPYNLRVRATLGSQTS/CLSHF/VSIPLIETQPSLPDL/RMEI TKDGFHLVIELEDLGPQFEFLVAYWRREPGEAEHVKMVRSGGIP VHLETMEPGAAYCVKAQTFVKAIGRYSAFSQTECVQGEAIP VIALFAFVGFMILILVVVPLFVWKMGRLLQ/YLLLPRGSSSQTPW KITQF |
| 5360 | 2 | 1115 | PRVRSSGGQEDPASQQWARPRFTQPSKMRRRVIARPVGSSVRLK CVASGHRPRPDI TWMKDDQALTRPEAAEPRKKWTLSLKNLRPED SGKYTCRVSNRAGAINATYKVDVIQRTSRKPEVLGTGTHPVNTTVD FGGTTSTFQCKVRSVDVKPVIQWLKRVEYGAEGRHNSTIDVGQKF VVLPTGDVWSRPGSYLNLKLLITRARQDDAGMYICLGANTMGYS FRSAFLTVLPDPKPPGPPVASSSSATSLPWFVIGIPAGAVFII GTLILLWLCAQKKPCTPAPAPPLPGHRPPGTARDRSGDKDLP AALSAGPGVGLCEEHGSAPAPQHLLGPGPVAGPKLYPKLYTCHS TPITYTHPPPSQCLNSSHS |
| 5361 | 3 | 925 | HEGSISSANILLDDQFQPKLTDFAHAFRSHLEHQSCSTINMTSS SSKHLWYMPBEYIRQGLSIKTDVYSFGIVIMEVLTCGRVLLDD PKHIQLRDLRLRELMKRGDLSDCLSLDKKVPCCPRNFSAKLFCL AGRCAATRAKL RPSMDEVLTLESTQASLYFAEDPPTSLKSFRC PSPLFLENVPSIPVEDDESQNNNLLPSDEGLRIDRMTQKTPFEC SQSEVMFLSLDKKPESKRNEEACNMPSSSCSESWFPKYIVPSQD LRPYKVNIDPSSEAPGHSCSRPVESSCSKFSWDEYEYQYKKE |
| 5362 | 2 | 4879 | SCQVEGCTRTYNSSQSIGKHMKTAHPDQYAAFKMQRKSKKGQA NNLNTPMNGKFVYFLSPVNSSNPFTTSQTKANGNPACSAQLQH VSPPIFPAHLASVSTPLSSMESVINPNITSDKNQGGMLCSQ MENLPSALPAQMEDLTKTVLPLNIDRGSDPFLSLPAESSSIDL FPSPADSGTNSVFSQLENNTNHYSSQIEGNTNSSFLKGGNGENA VFPSQVNVANFSSSTNAQSAPEKVKKDRGRGQTGKERKPKHNK RAKWPAILRDGKFCISRCYRAFTNPRSLGGHLSKRSYCKPLDGA ETAEQLQSNQGPSLLASMLSTNAVNLQQPQSTFNPEACFKD PSFLQLLAENRSPAFLPNTFPRSGVTNFNTSVSQEGSEIIIOAL ETAGIPSTFEGAEMLSHVSTGCVSDASQVNATVMPNPTVPPLH TVCHPNTLLTNQNRSTNSKTSSIECCSLPVFPTNDLLKTVEN GLCSSFPNNGGPSQNFSTNSSRVSVISGPQNTRSSHLNKKGNS ASKRRKKVAPPLIAPNASQNLVTSDLTTMGLIAKSVIPIPTNLH SNVIPTCEPQSLVENLTQKLNNVNQLFMTDVKENFKTSLSEHT VLAPLTLKTENGDSQMMALNSCTTSVNSDLQISEDNVIQNFKE LEI IKTAMNSQILEVKSGSQGAGETSQNAQINYNIQLPVNTVQ NNKLPDSSP\FSSFISVMPTESNIPQSE\VSHKEDQIQEILEGL QKLENDLSTPASQCVLINTSVTLTPTPVKSTADITVIQPVSE MINIQFNDKVNKPFCVQNCQCNYSAMTKDALFKHYGKIHQYTP MILEIKKNQLKFAFPKCVVPTCTKFTTRNSNLRAHCQLVHEFTT EEMVKLKI KRPYGRKSQSENVASRSTQVKKQLANTEENKESQ PALELRAETQNTHSNVAVIPKQLIEKKSPDKTESSLQVITVTS EQCNINALTNTQTGRKIRRHKKKEBEKKRKKPVQSLEFFTRY SPYRPRYCVHQCCFAAFTTIQQNLILHYQAVHKSDLPAFSAEVEE ESEAGKESEETETKQTLKEFRCCQVSDCSRIFQAITGLIQHYMKL HEMTPBEEIESMTASVDVGKFPDQLECKSSFTTYLNVVHLEAD HGIGLRASKTEEDGVYKDCCEGCDRIYATRSNLLRHFKNHNDK HKAHLIRPRRLTPGQENMSSKANQEKSKSKHRGTKHSRCCKEIGI KMPKTKRKKNNLENKNAKIVQIEENKPYSLKRGKHVYSIKARN DALSECTSRFTQYPCMIKCTSVVTSSENIIRHYKCHKLSKAF TSQHRNLLIVFKRCCNSQVKETSEQEGAKNDVKDSDTCVSESND NSRTTATVVSQKEVEKNE*DEMDELTELFTKLINESTSVETQA NTSSNVSNDFQEDNLCQSERQKASNLKRVNKEKNVSQNKRRKVE KAEPASAAELSSVRKEETAVAIQITIEEHPASFDWSSFKPMGFE VSFLKFLAESAVKQKKNTDRDHPNTGNKKGSHSNRKNIDKTAV TSGNHVCPCKESETFVQFANPSQLQCSNDVKIVLKNLKDCTEL |

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|------------|--|--|--|
| 5363 | 8066 | 703 | <p>VLKQLQEMKPTVSLKKLEVHSNDFDMSVMDTISIGKATGRGQY</p> <p>RLCCTGGGEGTPEGASGKRGPAATTSLVLCIPSVPPPVPFPTLWP</p> <p>PPSWRRQPPGGIRDFSRRLRREANLVATCLPVRASLPHRLNML</p> <p>RGPGPGLLLLAVLCLGTAVPSTGASKSKRQAQQMVQPQSPVAVS</p> <p>QSKPGCYDNGKHVYINQQWERTYLGNALVCTCYGSSRGFNCESK</p> <p>PEAEETCFDKYTGNTYRVGDTYERPKDSMIWDCTCIGAGRGRIS</p> <p>CTIANRCHEGGQSYKIGDTWRRPHETGGYMLECVCLGNGKGWWT</p> <p>CKPIAEKCFDHAAGTSYVVGETWEKPYQGWMMVDCTCLGEGSGR</p> <p>ITCTSRNRNDQDTRTSYRIGDTWSKKENRGNLLQCICTGNRG</p> <p>EWK CERHTSVQTTSSSGSGPFTDVRAAVYQPPHPQPPPYGHCVT</p> <p>DSGVVYSVGMQLA*KTQGNKQML\CTCLGNGVSCQETAQTQYTG</p> <p>GNSNGEPCVLPFTYNGRTFYSCTEGRQDGHLCSTTSNYEQDQ</p> <p>KYSPCTDHTVLVQTRGGNSNGALCHFPFLYNNHNYTDCSTSEGR</p> <p>DNMKWCGTTQNYDADQKFGFCPMAAHEEICTTNEGVMYRIGDQW</p> <p>DKQHDGMHMRCTCVGNRGGEWTCIAYSQLRDQCIVDDITYNVN</p> <p>DTFHKRHEEGHMLNCTCFGQGRGRWKCDPVDQCQDSEGTFTFYQI</p> <p>GDSWEKYVHGVRVYQCYCYGRGIGEWHCQLOTYPSSSGPVEVFI</p> <p>TETPSQPNSHPIQWNAQPSHISKYILRWRPKNSVGRWKEATIP</p> <p>GHLSYTIKGLKPGVVYEGQLISIQQYGHQEVTRFDFTTSTST</p> <p>PVTSNT\VTGETTFESPLVATSESVTEITASFVSVWSVASDITV</p> <p>SGFRVEYELSEEGDEPQYLVLPSSTATSV\NIP\DLLPGRKYIVN</p> <p>VYQISEDEGEQSLILSTSQTAPDAPPDETVDQVDDTSIVVRWSR</p> <p>PQAPITGYRIVYSEPSVEGSSSTELNLPETANSVTLSDLPQGVQYN</p> <p>ITTYAVEENQESTFVVIQQTETGTTPRSDTVPSPRDLQFVEVTDV</p> <p>KVTIMWTPPESAVTGYRVDVIPVNLPGHEGQRLPLSRNTF\AEN</p> <p>TGLSPGVITYYFKVEAVSHGRESKPLTACOTTKL\DAPTNLQFVN</p> <p>ETDSTVLVRWTPPRAQITGYRLTVGLTRRGQPRQYNVGPVSKEY</p> <p>PLRNLQPASEYTVSLVAIKGNQESPKATGVFTTLQPGSSIPYIN</p> <p>TEVTETTIVITWTPAPRIGFKLGVPRSPQCGEAPREVTSDSGSIV</p> <p>VSGLTPGVEYVYTIQVLRDQGERDAP\IVNK\VVTPLSPPNHLH</p> <p>LEANPDTGVLTVSWERSTTPDITGYRITTTPTNGQQGNSLEEVV</p> <p>HADQSSCTF\DNLEVPGLYEVSVYTVKDDKESVPISDTIIPAV</p> <p>PPPTDLRFTN\ILGPDTRMTW\APPPSIDLTNLFVRYSPVKNP</p> <p>GRMLQSLISIFFLSLN\AVVLTNLLPGTYVVSVSSEYQHESTP</p> <p>\LRGRQKTGLDSP\TGIDFS\DITA\NSFT\VHW\IAPRA\TPI</p> <p>TGYRIR\HHPEHF\SGRPREDR\VPHSRNSITLTNLTGTYEVV</p> <p>SIVALNCREESPLLIGQOSTVSDVPRDLEVVAATPTSLLI\SWD</p> <p>APAVTVRYRITYGETGNSPVQEFVPGSKSTATISGLKPGVD</p> <p>YTITVYAVTGRGDSPASSKPIISINRYTEIDKPSQMQVTDVQDNS</p> <p>ISVKWLPSSSPVTGYRVTT\PKNGPG\PTKTKTAGPDOTEMTI</p> <p>EGLQPTVEYVVSVAQNPSGESQPLVQTAVTNIDRPGLAFTDV</p> <p>DVDSIKIAWESPQGVSRVRYTYSSPEDGIHELFPAPDGEEDTA</p> <p>ELQGLRPGSEYTVSVVALHDDMESQPLIGTQSTAIPTPTDLKFT</p> <p>QVTPPTSLSAQWTPENVQLTGYRVRVTPKEKTGPMKEINLAPDSS</p> <p>SVVVSGLMVATKYEVSVYALKDTLTSRPAQGVVTTLENVSPERR</p> <p>ARVTDATETTTITISWRTKTETITGFQVDAVPANGQTPIQRTIKP</p> <p>DVRSYTTITGLQPGTDYKIYLYTLNDNARSSPVVIDASTAIDAPS</p> <p>NLRFLATTENSLVSWQPPRARITGYIIKYEKPGSPPREVVRP</p> <p>RPQVTEATITGLRPGTEYTIYVIALKNNQKSEPLIGRKKTDLP</p> <p>QLVTLPHENLHGPBILDVPSTVQKTPFVTHPGYDTGNGIQLPGT</p> <p>SGQQPSVGQQMI FEEHGFRRTTPTTATPIRHRPREYPPNVGQE</p> <p>ALSQTTISWAPFQDTSYIISCHPVGTDEEPLQFRVPGTSTSAT</p> <p>LTGLTRGATYNIIVEALKDQQRHKVREEVTVGNSVNEGLNQPT</p> <p>DDSCFDPTYTVSHYAVGDEWERMSESGFKLLCQCLGFGSGHFRCD</p> <p>SSRWCHDNGVNYKIGEKNDRQGENGQMSCTCLGNGKGEFKCDP</p> <p>HEATCYDDGKTYHVGEQWQKEYLGAICSCCTCFGGQRGWRCDNCR</p> <p>RPGGEPSPGTTGQSYNQYSQRYHQRTNTNVNCPICEFMPDLVQ</p> <p>ADREDSRE</p> |
| 5364 | 8066 | 703 | <p>RLCCTGGGEGTPEGASGKRGPAATTSLVLCIPSVPPPVPFPTLWP</p> <p>PPSWRRQPPGGIRDFSRRLRREANLVATCLPVRASLPHRLNML</p> <p>RGPGPGLLLLAVLCLGTAVPSTGASKSKRQAQQMVQPQSPVAVS</p> |

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|------------|--|--|--|
| | | | QSKPGCYDNGKHYQINQWERTYLGNALVCTCYGSGRGFNCESK PEABETCFDKYTGNTRYRVDGTYERPKDSMIWDCTCIGAGRGRIS CTIANRCHEGGQSYKIGDTWRRPHETGGYMLECVCLGNGKGEWT CKPIAEKCFDHAAGTSYVVGETWEKPYQGWMVMDCTCLGEGSGR ITCTSRNRCNDQDTRTSYRIGDTWSKKDNRGNLLQOCITGNGRG EWKCEHRTSVQTTSSSGSFFTDVRAAVYQPPHPQPPYPYGHCVT DSGVVYSVGMQLA*KTQGNKQML\CTCLGNGVSCQETAVTQTQY GNSNGEPCVLPFTYNGRTFYSCCTEGRODGHLCSTTSNYEQDQ KYSFCTDHTVLVQTRGGNSNGALCHFPFLYNNHNYTDCTSEGR DNMKWCGTTQNYDADQKFGFCMAAHEICTTNEGVMYRIGDQW DKQHDMMHMRCTCVGNGRGEWTCIAYSQLRDQCIVDDITYNVN DTFHKRHEBGMNLNCTCFGQGRGRWKCDDPVDQCDSETGTFYQI GDSWEKYVHGVRVYQCYGRGIGEWHCQPLQTYPSSSGPVEVFI TETPSQPNSHPIQWNAQPSHISKYILRWRPKNSVGRWKEATIP GHLNSYTIKGLKPGVVYEGQLISIQYGHQEVTRPDTTSTST PVTSTNT\VTGETPFFSLVATSESVTEITASSFVVSWSVAGDTV SGFRVEYELSEEGDEPQYLVLPSTATSV\NIP\DLPGRKYIVN VYQISEDEGEQSLILSTSQTTAFDAPPDPTVDQVDDTSIVVRSR PQAPITGYRIVYSPSVEGSSSTELNLPETANSVTLSDLQPGVQYN ITIYAVENQESTPVVYQQTETGTTPRSDTVSPRDLQFVEYTDV KVTIMWTPPESAVTGYRVDVIPVNLPGEHGQRLPLSRNTF\AEN TGLSPGVTYFFKVFVAVSHGRESKPLTAQQT\KCL\DAPTNLQFVN ETDSTVLVRWTPPRAQITGYRLTVGLTRRQPRQYNVGPVSKY PLRNLQPASEYTVSLVAIKGNQESPKATGVFTTLQPGSSIPYN TEVTETTIVITWTPAPRIGFKLGVPRSQGGEAPREVTSDSGSIV VSGLTPGVEYVYTIQVLRDGGQERDAP\IVNK\VVTPLSPTNLH LEANPDGTGLTVSWERSTTPDITGYRITTTPTNGQQGNSLBEVV HADQSSCIF\DNLEVPGLEYNVSVYTVKDDKESVPISDTIIIPAV PPPTDLRFTN\ILGPDTRVW\APPPSIDLTNFLVRYSPVKNE GRMLQSLSIFFLSDN\AVVLTNLLPGTEYVVSVSVEQHESTP \LRGRQKIGLDSPTGIDFS\DITA\NSFT\VHW\IAPRA\TPI TGyrIR\HHPHF\SGRPREDR\VPHSRNSITLNLTPGTEYV SIVALNGREESPLLIGQQSTVSDVPRDLEVVAATPTSLLI\SWD APAVTVRYRITYGETGCNSPVQEFVPGSKSTATISGLKPGVD YTITVYAVTGRGDSPASSKPIISINYRTEIDKPSQMQVTDVQDNS ISVKWLPSSSPVTGYRVTTT\PKNGPG\PTKIKTAGPDQTEMTI EGLOPTVEYVVSVAQNPSGESQPLVQTAVTNIDRPKGLAFTDV DVDSIKIAWESPGQVSRVRYTSSPEDGIHELFPAPDGEEDTA ELQGLRPGSEYTVSVVALHDDMESQPLIGTQSTAIAPPTDLKFT QVTPTSLSAQWTPPNVQLTGYRVVTPKEKTGPMKEINLAPDSS SVVVSGLMVATKYEVSVAALKDTLTSRPAQGVVTTLENVSPRR ARVTDATETTITISWRTKTETITGFQVDAVPANGQTPIQRTIKP DVRSYTITGLQPGTDYKIYLYTLNDNARSSPVVIDASTAIDAPS NLRFLATTPNSLLVSNQPPRARITGYIIKYEKPGSPPREVVP RPGVTEATITGLEPGTEYTIYVIALKNNQKSEPLIGRKKTDLEP QIVTLPHPNLHGPEILDVPSTVQKTPFVTHPGYDTGNGIQLPGT SGQQPSVGQMIFFEEHGFRRTPPTTATP\IRHRPRPYPPNVGQE ALSQTTISWAPPQDTSYIIISCHPVCTDEEPLQFRVPGTSTSAT LTGLTRGATYNIIVEALKDQQRHKVREBEVTVGNSVNEGLNQPT DDSCFDPTYTVSHYAVGDEWERMSESGFKLLCQCLGFGSGHFRCD SSRWCHDNGVNYKIGEKWDRQGENQMMSCTCLGNGKGEFKCDP HEATCYDDGKTYHVGEQWQKEYLGAICSCCTCFGQQRGWRCNCR RPGGEPSPGTTGQSYNQYSQRYHQRTNTNVNCFIECFMPLDVQ ADREDSRE |
| 5365 | 8066 | 703 | RLCCTGGGEGTPGASGKRGAATTSVLVLCIPSVFPPVPFPTLWP PPSWRRQPPGGIRRDPSRRLRREANLVATCLPVRASLPHRLNML RGPGGLLLLLLAVLCLGTAVPSTGASKSKRQAQMVQPPQSEVAVS QSKPGCYDNGKHYQINQWERTYLGNALVCTCYGSGRGFNCESK PEABETCFDKYTGNTRYRVDGTYERPKDSMIWDCTCIGAGRGRIS CTIANRCHEGGQSYKIGDTWRRPHETGGYMLECVCLGNGKGEWT CKPIAEKCFDHAAGTSYVVGETWEKPYQGWMVMDCTCLGEGSGR |

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|------------|--|--|---|
| | | | <p>ITCTSRNRCNDQDTRTSYRIGDTWSKKDNRGNNLQCICITGNRG EWKCEHRTSVQTTSSGSGPFTDVRAAVYQPPHPQPPPYGHCVT DSGVVYSVGMQLA*KTQGNKQML\CTCLNGVSCQETA VTQTYG GNSNGEPCVLPFTYNGRTFYSCCTEGRQDGHLCSTTSNYEQDQ KYSFCTDHTVLVQTRGGNSNGALCHFPFLYNNHNYTDCTSEGR DNMKWCGTTQNYDADQKFGFCMAAHEE ICTTNEGVMYRIGDQW DKQHDMMHMRCTCVGNRGGEWTCIAYSQRLDQCIVDDITYNVN DTFHKRHEEGHMLNCTCFGQGRGRWKC DPVDCQDSETGTFFYQI GDSWEKYVHGVRVYQCYCYGRGIGEWHCQPLQTYPSSSGPVEVFI TETPSQPNSHPIQWNAQPSHISKYILRWRPKNSVGRWKEATIP GHLNSYTIKGLKPGVVYEGQLISIQYGHQEVTRFDFTTSTST PVTNT\VTGETTFFSPLVATSESVTEITASSFVSVWSASDTV SGFRVEYELSEEGDEPQYLVLPLSTATSV\NIP\DLLPGRKYIVN VYQISEDEGEQSLILSTSQTTAPDAPPDPTVDQVDDTSIVVRWSR PQAPITGYRIVYSPSVEGSSSTELNLPETANSVTLSDLQPGVQYN ITIYAVEENQESTPVVQQETTGTPRSDTVSPRDLQFVEVTDV KVTIMWTPPESAVTGYRVDVIVPNLPGEGHQRPLSRNTF\AEN TGLSPGVTYFFKVFVAVSHGRESKPLTAQQTTL\DAPTNLQFVN ETDSTVLVRWTPPRAQITGYRLTVGLTRRQPRQYNVGPVSYSKY PLRLNLQPASEYTVSLVAIKGNQESPKATGVFTTLQPGSSIPYN TEVTETTIVITWTPAPRIGFKLGVRPSQGGAPREVTSDSGSIV VSGLTPGVEYVYTIQVLRDGGQERDAP\IVNK\VVTPLSPTNLH LEANPDGTGLTVSWERSTTPDITGYRITTTPTNGQQGNSLEEVV HADQSSCTF\DNLEVPGLEYNVSVYTVKDDKESVPISDTIIIPAV PPPTDLRFTN\ILGPDTRVTVW\APPPSIDLTNFLVRYSPVKNE GRMLQSLSIFFLSDN\AVVLTNLLPGTEYVVSVSVEYQHESTP \LRGRQKTGLDSP\TGIDFS\DTA\NSFT\VHW\IAPRA\TPI TGYRIR\HHPHF\SGRPREDR\VPHSRNSITLTNLTGTEYVW SIVALNGREESPLLIGQOSTVSDVPRDLEVVAATPTSLII\SWD APAVTVRYRITYGETGNSPVQEFVTPGSKSTATISGLKPGVD YTIITVYAVTGRGDSPASSKPIISINRYTEIDKPSQM QVTDVQDNS ISVKWLPSSSPVTGYRVTTT\PKNGPG\PIKTKTAGPDQTEM TI EGLQPTVEYVVSVAQNP SGESQPLVQTAVTNIDRPKGLAFTDV DVDSIXIAWESPQGVSRVRYVYSSPEDGIHELFPAPDGEEDTA ELQGLRPGSEYTVSVVALHDDMESQPLIGTQSTA-PAPTDLKFT QVTPTSLSAQWTPPNVQLTGYRVVTPKEKTGPMKEINLAPDSS SVVVSGLMVATKYEVSVYALKDTLTSRPAQGVVTTLENVSPRR ARVTDATETTTITISWRTKTE\ITGFQVDAVPANGQTPIQRTIKP DVRSYTIITGLQPGTDYKIYLYTLNDNARSSPVVIDASTAIDAPS NLRFLATTPNSLLVSWQPPRARITGYIIKYEKPGSPPREVVPRP RPGVTEATITGLEPGTEYTIYVIALKNNQKSEPLIGRKKTDLEP QLVTLPHPNLHGPEILDVPSTVQKTPFVTHPGYDTGNGIQLPGT SQQQPSVGGQMI FEEHGFRRTPPTTATPIRHRPRPYPPNVGQE ALSQTTISWAPFQDTSEYIIISCHPVGTDEEPLQFRVPGTSTSAT LTGLTRGATYNIIVEALKDQQRHKVREEVTVGNSVNEGLNQPT DDSCFDPTYTVSHYAVGEWERMSESGFKLLCQCLGFGSGHFRCD SSRWCHDNGVNYKIGEKWDRQGENGQMMSCCTCLNGKGEFKCDP HEATCYDDGKTYHVGBQWQKEYLGAICSCCTCFGGQGRWRCNCR RPGGEPSPGTTGQSYNQYSQRYHQRTNTNVNCP IECFMPLDVQ ADREDSRE</p> |
| 5366 | 8066 | 703 | <p>RLCCTGGGEGTPCASGKRGPAATTSVLVLCIPSVPEPVPPTLWP PPSWRRQPPGIRRD FSRRLRREANLVATCLPVRASLPHRLNML RGPFGPGLLLLAVLCLGTAVPSTGASKSKRQAQQMVPQSPVAVS QSKPGCYDNGKHYQINQQWERTYLGNALVCTCYGSGRFPNCESK PEAEETCFDKYTGNTRYRGDTYERPKDSNIWDCTCIGAGRGRIS CTIANRCHEGGQSYKIGDTWRRPHETGGYMLECVCLNGKGEWT CKPIAEKCFDHAAGTSYVVGETWEKPYQGWMMVDCTCLGEGSGR ITCTSRNRCNDQDTRTSYRIGDTWSKKDNRGNNLQCCI CTGNRG EWKCEHRTSVQTTSSGSGPFTDVRAAVYQPPHPQPPPYGHCVT DSGVVYSVGMQLA*KTQGNKQML\CTCLNGVSCQETA VTQTYG GNSNGEPCVLPFTYNGRTFYSCCTEGRQDGHLCSTTSNYEQDQ</p> |

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|------------|--|--|---|
| | | | <p>KYSFCTDHTVLVQTRGGNSNGALCHFPFLYNNHNYTDCSTSEGR</p> <p>DNMKWCGTQNYDADQKFGFCPMAAHEBICTTNEGVMYRIGDQW</p> <p>DKQHDMMHMRCTCVGNRGEWTCIAYSQLRDQCIVDDITYNVN</p> <p>DTFHKRHBEGHMLNCTCFGQGRGRWKCDPVDQCQDSETGTFTYQI</p> <p>GDSWEKYVHGVRVYQCYCYGRGIGEWHCQPLQTYPSSSGPVEVFI</p> <p>TETPSQPNSHPIQWNAPOPSHISKYILRWRPKNSVGRWKEATIP</p> <p>GHLNSYTIKGLKPGVVYEGQLISIQYGHQEVTRFDFTTTSTST</p> <p>PVTSNT\VTGETTFFSPLVATSESVTEITASSFVVSWSASSTV</p> <p>SGFRVEYELSEEGDEPQYLVLPLSTATSV\NIP\DLLPGRKYIVN</p> <p>VYQISEDEGEQSLILSTSQTAPDAPPDETVDQVDDTISIVRWSR</p> <p>PQAPITGYRIVYSPSVEGSSSTELNLPETANSVTLSDLQPGVQYN</p> <p>ITIVAVEENQESTPVVIQOETTGTTPRSETVPSPRDLQFVEVTDV</p> <p>KVTIMWTPPESAVTGYRVDVIPVNLPGHEHGQRLPLSRNTF\AEN</p> <p>TGLSPGVITYYFKVFAVSHGRESKPLTAQOTTKL\DAPTNLQFVN</p> <p>ETDSTVLVRWTPPRAQITGYRLTVGLTRRGQPRQYNVGPVSVKY</p> <p>PLRNLQPASEYTVSLVAIKGNQESPKATGVFTTLQPGSSI\PPYN</p> <p>TEVTETTIVITWTPAPRIGFKLGVRPSQGGAPREVTSDSGSIV</p> <p>VSGLTPGVVEYVYTIQVLRDGGQERDAP\IVNK\VVTPLSPPTNLH</p> <p>LEANPDITGVLTVSWERSTTPDITGYRITTTTNGQOGNSLEEVS</p> <p>HADQSSCTF\DNLEVPGLYNNVSVYTVKDDKESVPI\SDTIIPAV</p> <p>PPPTDLRFTN\ILGPDITMRVTW\APPPSIDLTNLFVRYSPVKN</p> <p>GRMLQSLSIFFLSDN\AVVLTNLLPGTEYVVSVSVEQHESTP</p> <p>\LRGRQTGLDSP\TGIDFS\DITA\NSFT\VHW\IAPRA\TPI</p> <p>TGYRIR\HHPEHF\SGRPREDR\VPHSRNSITLTNLTGTEYVV</p> <p>SIVALNGREESPLLIGQOSTVSDVPRDLEVAATPTSLLI\SWD</p> <p>APAVTVRYRYITYGETGCGNSPVQEFVPGSKSTATISGLKPGVD</p> <p>YTITVYAVTGRGDSPASSKPI\SINYRTEIDKPSQM\QVTDVQDNS</p> <p>ISVKWLPSSSPVTGYRVTTT\PKNGPG\PTKTKTAGPDQTEMTI</p> <p>EGLQPTVEYVVSVAQNPSGESQPLVQTAVTNIDRPKGLAFTDV</p> <p>DVDSIKIAWESPGQVSRVRYTYSSPEDGIHELFPAPDGEEDTA</p> <p>ELQGLRPGSEYTVSVVALHDDMESQPLIGTQSTAI\PAPTDLKFT</p> <p>QVTPTSLSAQWTPPNVQLTGYRVRVTPKEKTGPMKEINLAPDSS</p> <p>SVVVSGLMVATKYEVSVYALKDTLTSRPAQGVVTTLENVSPRR</p> <p>ARVTDATETTTITISWRTKTETITGQVDAVPANGQTP\IORTIKP</p> <p>DVRSYITITGLQPGTDYKIYLYTLNDNARSSPVVIDASTAIDAPS</p> <p>NLRFLATTPNLSLLVSWQPPRARITGYIIKYEKPGSPPREVVPR</p> <p>RPGVTEATITGLEPGTEYTIYVIALKNNQKSEPLIGRKKTDLP</p> <p>QLVTLPHPNLHGPEILDVPSTVQKTPFVTHPGYDTGNGIQLPGT</p> <p>SGQQPSVGQOMIFEEHGFRRTTPPTTATPIRHRPRPYPNVGQE</p> <p>ALSQTTISWAPFQDSEYIISCHPVGTDDEPLQFRVPGTSTSAT</p> <p>LTGLTRGATYNIIVEALKDQQRHKVREEVTVGNSVNEGLNQPT</p> <p>DDSCFDPTYTVSHYAVGDEWERMSESGFKLLCQCLGFGSGHFRCD</p> <p>SSRWCHDNGVNYKIGEKWDRQGENGQMMSCCTCLGNGKGEFKCDP</p> <p>HEATCYDDGKTYHVGEQWQKEYLGAICSCCTCFGQGRWRCDNCR</p> <p>RPGGEPSPEGTGQSYNQYSQRYHQRTNTNVNCP\ECFMEPLDVQ</p> <p>ADREDSRE</p> |
| 5367 | 235 | 3591 | <p>KKILNMLCKKNIVIEYLADILYELYGFCFSGIKKYLIHVLRL</p> <p>ILELWMTRLLEKSVSLQTQYLLLVKILSWFFGKEMRHHLQIM</p> <p>EVMRQKDS/RIVGNSEQQQLQKELADVLMDPPMDQPGKEKLV</p> <p>KRSQLDGEGDGFLSNQLSASSTINPVPLVGLQKPEMSLPVKPGQ</p> <p>GDSEASSPFTPVADEDSVVFSKLTLYLCASVNAPRSEVEALRMM</p> <p>SILRSQCQISLDVTLSPNVSEGI VRLLDPTNTEIANYPYIKI</p> <p>LFCVRGHDGTPESDCFAFTESHYNABLFRHVFRCETIQEAVSRI</p> <p>LYSFATAFRRSKQTPLSATAAPQTPDSIDFTFSVSLEIKEDDG</p> <p>KGYFSAVPKDKDRQCFKLRQGDIDKKIVYVQQTNNKELAIERCF</p> <p>GLLLSPGKDVNRNDMHLLDLESMDGSSDGKSYVITGSWNPKSP</p> <p>FQVVBETPKDKVLFMTTAVDLVITEVQEPVRFLETKVRVCSF</p> <p>NERLFWFFSKRSTTENFFLKLKQIKQRERKNNTDTLYEVVCLBS</p> <p>ESERERRKTTASPSVRLPQSGSQSSVIPSPPEDDEEDENDEPLL</p> <p>SGSGDVSKECAEKILETWGELLKWHNLNVRPKQLSSLVNRNGV</p> <p>PEALRGEVWQLLAGCHNNDHLVEKYRILITKESPCDSAITRDIN</p> |

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|------------|--|--|---|
| | | | RTFPAHDYFKDTGGDQDSLYKICKAYSVDDEIGYCQGSFLA AVLLHMPPEQAFSVLVKIMFDYGLRELKQNFEDLHCKFYQLE RLMQEYIPDLYNHFLDISLEAHMYASQWFLTLFTAKFPLYMVFH IIDLLLCBGISVIFNVALGLLKTSKDDLLITDFEGALKFFRVQL PKRYRSEENAKKLMELACNMKISQKKLKKYEKYHTMREQQAAQ EDPIERFERENRRLQEANMRLEQENDDLAHELVTSKIALRKDLD NAEEKADALNKELLMTKQKLIDAEKEKRREESAHLLKMKRRE LDKAESEIKKNSSIIGDYKQICSQLSERLEKQQTANKVEIEKIR QKVDDCERCREFFNKEGRVKGISSTKEVLDEDTDEBKETLNQ REMELELAQTKL\QLVEAECKIQD\LEHFF*GLPFNE\VQAA\K KTWFRNLSSIKTATGQVKETC |
| 5368 | 573 | 2014 | GAAAGAADPRRSLGGRMTLDFATFAVTFLLALVGAVLYLPAS RQAGIPGITPTTEKDNLPDIVNSGSLHEFLVNLHRYGPVVS WFGRRLVVSGLTVDVLKQHINPNKTLD/LF*NHAEVVIKVSITW WWQCE*KP\QRKKLYENGVTDSLKSNFALLKLPELLDKNLSY PETQH\VELSQHMLGFAMKSVTQMVMGSTFEDDQEVIRFQXNHG TVWSEIGKGFLLDGLDNMTRKKOYEDALMOLESVLNRI IKERK GRNFSQHIFIDS\VGQNLNDQQILEDSMIFSLASCIITAKLCTW AIWFLTSTEEVQKKLYEINQVFGNGPVTPEKIEQLRYCQHVLC ETVRTAKLTVPVSAQLQDIEGKIDRFIIPRETLYLYALGVV\QDP NTVPSPHKFDPRDFDELVMKTFSSSLGFGSGTQECPELRFAYMVT TVLLSVLVKRLHLLSVEGQVETKYELVTSSEAWITVS KRY |
| 5369 | 1 | 6622 | PRSLCFLWAAAVLADGGLRRRRRLRGTMASAFVFNGLASLED CHCNLFCLADLTGKIKWKYVWQGPSTAPILFPVTEEDPILSSFS RCLKADVLG/VWRRDQRPERR*I FWGGBDP\VLTLFTMTY QKKKMECGRMDPFMNAVLCSKAVHNLRLCLMNRNFRVIGKWF VKPYEKDEKPKINKSEHLSCSFTFFLHGDSNVCTSVINQHQPVY LLSEEHITLAQQSNSPFQVILCPFGNLGTLTGQAFKMSDSATKK LIGEWKQFYPISCCLKEMSEKQEDMDWEDDSLAAVEVLVAGVR MIYPACFVLVPQSDIPTSPVSGSTHCSSSCLGVHQVPASTRDPA MSSVTLTPPTSPEEVQTVDPQSVQKWKVFSSVSDGFNSDSTSHH GGKIPRKLANHVVDVWQECNMNRAQNKRYASASSGGLCEATA AKVASWDFVEATQRTNCSCLRHKNLKS RNAGQQGQAPSLGQQQ ILPKHKITNEKQEKSEKPKRPLTPFHHRVSVSDDVGMD\ADS\A SQRLV\ISAP\DSQ\VRFSNIR\TNDVAK\TPQMHTGEMANSPO PPPLSP\HPCDVVDEGVTKTPTSTPQSQHFYQMPTPDLVPSKPM EDRIDSLSSQSFPPQYQEAVEPTVYVGTAVNLEDEANIAWKYK FPKKKDVEFLPPQLPSDKFKDDPVGPFQGESVTSVTELMVQCKK PLKVSDELVQQYQIKNQCLSAIASDAEQEPKIDPYAFVEGDEEF LFPDKKDRONSEREAGKKHKVEDGTSSVTLSHEEDAMSLSFSPS IKQDAPRPTSHARPPSTSLIYSDSLAVSYTDLNLFNSDEDELT PGSKRSANGSDDKASCKBSKTGNLDP LSCISTADLHKMYPTPPS LEQHIMGFSPMNMNKEYGSMDTTPGGTVLEGNSSSIGAQFKIE VDEGFCSPKPSKSEIKDFSYVYKPENCQILVGCMSFAPLKTLP LPLIKLPEECIYRQSWTVGKLELLSSGSPMPFIKEGDCSNMDQE YGTAYTPQHTSTCGMPPSSAPPSNSGAGILPSPSTPRFPTPT RTPTPTPRGAGGPASAGSVKYENS DLYSPASTPTPCRPLNSVEP ATVPSIPEASHLYVNLILSESVMNLFKDCNSDSCCICVCNMNIK GADVGVYIPDPTQEAQYRCTCGFSAVMNRKFGNNSGLFFDELD IIGRNTDCGKEAEKRFEALRATS AEHVNGGLKESEKLSDDLILL LQDQCTNLFSPFGAADQDPFKSGVISNWRVVEERDCCND CYLA LEHGRQFMDNMSGKVDEALVKSSCLHPWSKRNDVSMQCSQDIL RMLLSLPVLQDAIQKRTVRPWGVQGPLTWQQFHKMAGRGSY TDESPEPLPIPTFLGYDYDYLVLSPFALPYWERLMLPEYGSQR DIAYVVLCPENEALNGAKSFDRDLTAIYESCRLGQHRPVSRLL TDGIMRVGSTASKKLSEKLVAEWFSQAADGNNEAFSKLKYAQV CRYDLGPYLASLP L DSSLLSQPNLVAPTSQSLITPPQMTNTGNA NTPSATLASAASSTMTVTS GVAISTSVATANSTLTASTSSSSS SNLNSGVSSNKLPSPFPFGMNSNAAGSMSTQANTVQSGQLGGQ QTSALQTAGISGESSSLPTQPHPDVSESTMDRDKVGIPTDGDSH AVTYPPIAVVYIIDPFTYENTDESTNSSSVWTLGLLRCFLM VQ |

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|------------|--|--|---|
| | | | <p>TLPPHIKSTVSVQIIPCOYLLQPVKHEDREIYPQHLKSLAFSAF</p> <p>TQCRRLPTSTNVKTLTGFGPGLAMETALRSPDRPECIRLYAPP</p> <p>FILAPVKDKQTELGETFGEAGQKYNVLFVGYCLSHDQRWILASC</p> <p>TDLYGELLETCIINIDVFNRRARRKKSSARKFGLQKLWEWCLGLV</p> <p>QMSSLPWVWVIGRLGRIGHGELKDWSCLLSRRLQSLSKRLKDM</p> <p>CRMCGISAADSPSILSACLVAMEPQGSFVIMPDSVSTGVSFGRS</p> <p>TTLMQTSQNLTPQDTSCTHILVFPPTSASVQVASATYTTENLDL</p> <p>AFNPNNDGADGMGIFDLDTGDDLDPIINILPASPTGSPVHSP</p> <p>GSHYPHGGDAGKQSTDRLLSTEPHEVPNIIQQPLALGYFVST</p> <p>AKAGPLPDWFSACPAQYQCPLFLKASLHLHVPVSQSDLELHLS</p> <p>KHSHPLDSNQTSJVLRFVLEQYNALSWLTCDFATQDRRSCLPIH</p> <p>FVVLNQLYNFIMNML</p> |
| 5370 | 1226 | 716 | <p>RWSRKLELRRAAQATESRPPQSQEMHPTGKEVHALKRLRDSAN</p> <p>ANDVETVQQLLEDGADPCAADDKGRALHFASCNGNDQIVQLLL</p> <p>DHGADPNQRDGLGNTPLHLAACTNHVPVITTLRGGARVDALDR</p> <p>AGRTPLHLAKSKLNILQEGHAQCLKAVR/HGGEADHPYAEVGS</p> <p>APRAT*AARCSGVFPSPSRWLGSAPWSRSSCTIWSLPLHEAKCR</p> <p>AVRPLSSAAQGSAPSSSSCCTVSTSLALAESLSLFRACSTLPLVG</p> <p>GCISWL</p> |
| 5371 | 1331 | 167 | <p>IAAMLWKLLRSQSCRLCSFRKMRSPPKYRPFACFTYTTDKQS</p> <p>SKENTRIVKELYKCSVDIRKIRR*KDGYYF*RMKPMKKLRI/F</p> <p>LQELGADETAVASILERCEPAIVCSPATAVNTQRKLWQLVCNEE</p> <p>ELIKLIBEQFPESFFTIKDQENQKLVQFFQELGLKNVVISRLIT</p> <p>AAPNVFHNPEKKNQMVRIQLQESYLDVGGSEANMKVWLLKLLSQ</p> <p>NPFILLNSPTAIKETLEFLQEQGFTSFEILQLLSKLKGLFQLC</p> <p>PRSIQNSISFSKNAFKCTDHDHLKQLVLKCPALLYSPVPLEERM</p> <p>QGLLREGISIAQIRETPMVLELTPQIVQYRIRKLNSSGYRIKDG</p> <p>HLANLNGSKKEFEANFGKIQAQKVRPLENPVAPLNVBE</p> |
| 5372 | 51 | 857 | <p>SPGAQFLWAAPDMPDPLFSAVQGGKDEILHKALCFCPWLGRGGME</p> <p>PLRLILLFVTELSGAHNTTVFQGVAGQSLQVSCPYDSMKHWGR</p> <p>RKAWCRQLGEGKGPCQRRVSTHNLWLLSFLRRWNGSTAITDDTLG</p> <p>GTLTITLRLNLPDAGLYQCQSLHGSADTLRKVLVEVLADPLD</p> <p>HRDAGDLWFPG\DLRASRMPMWSTASPGASWKEKSPSHPLPSFS</p> <p>SWPASFSRPF*QAPPSGLQPGMDRSQGHIIHPVNWTVAMTQGIS</p> <p>KLCQG</p> |
| 5373 | 2814 | 346 | <p>VKTKTSIFNSAQEMEVYVENIRRKFGVFNYSFPRTPTPNSQY</p> <p>QMLLDPTNPSAGTAKIDKQEKVKNFDMTASPKILMSKPVLSGG</p> <p>TGRRISLSDMPSPMSTNSSVHTGSDVEQDAEKKATSSHSASE</p> <p>ESMDFLDKSTASPASTKTGQAGSLSGSPKFPSPQLSAPITTKTD</p> <p>KTSTTGSILNLDNRKAEMDLKELSESQVQGSTPVPLISPKRQ</p> <p>IRSRFQNLNLDKTIKESCAQLGINEISEDVYTAVEHSDSESEKS</p> <p>DSSDSEYISDDEQKS*GTSQEDTEDKEGCQMDKEPSAVKKKPKP</p> <p>TNPVEIKEELKSTSPASEKADPGAVKDKASPEPEKDFSGKAKPS</p> <p>PHPIKDKLKGKDETDSPVHLGLDSDSE\NELVIDLGEDHSGRE</p> <p>GRKNKKEPKPSPKQDVVGKTPPSTTVGSHSPETPVLTSSAQ</p> <p>TSAGATATTSTSTVTVTAPAPAATGSPVKQRPLLPKE\TAP</p> <p>AVQRSCGTSSTVQKEITQSPSTSTITLVTSTQSSPLVTSSGSM</p> <p>STLVSSVNGDLPIGTASADVAADIAYTSKL\MDAIGKTM\TEI</p> <p>YNDLSKN\TTWKAQLAEDSQGLRIEIEKLQWLHQQL\SEMKNH</p> <p>LELTMAEMRQSWEQERDLIAEVKKQLELEKQQAQVDETKKKQWC</p> <p>ANFKKEAIFYCCWNTSYCDYPCQ\QAHWPBH\MKSCTQSATAPQ</p> <p>\QADAE\VNTETLNKSSQSSSSSTQSAPSETASA\SKKETSA</p> <p>EKSKESGSTLDLGSRETPSSILLGSNQGSDHSR\SNKSSWSSS</p> <p>DEKRS\TRSDHN\TPSTQHGRSLLPKESRAGTFLGTSK</p> |
| 5374 | 2814 | 346 | <p>VKTKTSIFNSAQEMEVYVENIRRKFGVFNYSFPRTPTPNSQY</p> <p>QMLLDPTNPSAGTAKIDKQEKVKNFDMTASPKILMSKPVLSGG</p> <p>TGRRISLSDMPSPMSTNSSVHTGSDVEQDAEKKATSSHSASE</p> <p>ESMDFLDKSTASPASTKTGQAGSLSGSPKFPSPQLSAPITTKTD</p> <p>KTSTTGSILNLDNRKAEMDLKELSESQVQGSTPVPLISPKRQ</p> <p>IRSRFQNLNLDKTIKESCAQLGINEISEDVYTAVEHSDSESEKS</p> <p>DSSDSEYISDDEQKS*GTSQEDTEDKEGCQMDKEPSAVKKKPKP</p> |

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|------------|--|--|---|
| | | | TNPVEIKEELKSTSPASEKADPGAVKDKASPEPEKDFSGKAKPS PHPIKDKLKGKDETDSPVHLGLDSDSE\NELVIDLGEDHSGRE GRNKKKEPKSPKQDVVGKTPPSTTVGSHSPPETPVLTRSSAQ TSAAGATATTSTSTVTVPAPAPATGSPVKKQRPLLPKE\IAP AVQRSCGTSSTVQKEITQSPSTSTITLVTSQSSPLVTSSGSM STLVSSVNGDLPIGTASADVAADIAKYTSKL\MDAIKGTMTETI YNDLSKN\TTWKAQLAEDSQGLRIEIEKLQWLHQQL\SEMKHN LELTMAEMRQSWEQERDLIAEVKKQ\LELEKQQAQVDETKKKQWC ANFKKEAIFYCCWNTSYCDYPCQ\QAHWPEH\MKSCTQSATAPO \QEADAE\VNTETLNKSSQSSSSSTQSAPESETASA\SKEKETS EKSKEGSGTLDLGSRETPSSILLGSNQGSDHSR\SNKSSWSSS DEKRG\TRSDHN\TPSTQHGRSLLPGKESRAGTFFLGTSK |
| 5375 | 2907 | 1116 | HIFLAEEEPMLERRCRGPLAMGPAQPRLLSGPQSESPQTLGKES RGLRQQGTSVA\QSGAQAPGRAHRCACRRHFGWVA\LWLHTR RCQA\RGLPLPCPECGRRFRHAPFLALHRQVHAAATPDWGFACH LCQGSFRGWVALVLHLRAHSAKAGPFACPKMARDAFWRRKAAS SSILRRCHPSRPRGPRPFICGNCGRSILFTWDQ/LKVAHKRVHV SRP*ERGPPAKVFWGPRPRGPPTGDTPPGEGGDAVDRPFQCA CCGKRFRHK\PNLIRSHAACSTGERPHQ/CSRECG\KRFTNKP LTS\HRRITHTRQOPYPCKECCRRFRHKPNLLSHSKIHKRSEGS AQAAPGPGSPQLPAGPQESAAEPTPAVPLKPAQEPPEPPGAPPEHP QDPIEAPPSLYSCDDCGRSFRLEFLRAHQOHTGERPPTCAEC GKNFGKKTHLVAHSRVHSGERPFLARKCGRFLPRASQSGGRN SABPNAPRFPGPFVCPDCGKAFRHKPYLAHRPIATPAEKPVVCP DCRKAFSQKSNL\VSHRRIHTGERPYACPCDRSFSQKSNLITH RKSHIRDGAFFCAICGQTFDDEERLLAHQKKHDV |
| 5376 | 4504 | 591 | VSTFSLCLWPAGGGGRGRVSNMAQSKRHVYSRTPSGSRMSAEAS ARPLRVGSRVEVIGKGHRGTVAIVGATLFATGKVVGVILDEAKG KNDGTVQGRKYFTCDEGHGIFVRQSQIQVFEDGADITSPETPDS SASKVLKREGTDTTAKTSKLRGLKPKKAPTARKTTTRRPKPTRP ASTGVAGASSSLGPGSASAGELSSSEFPSTPAQTPLAAPIIPTP VLTPGAVPPLPSPSKEEGLRAQVRDLEEKLETLLRKRADKA KLKELEKHKIQLEBQVQEWKSKMQEQQADLQRLKEARKEAKEAL EAKERYMEEMADTADAIEMATLDKEMAEERAESLQEQVEALKER VDELTDDLEILKAEIEKSGSDGAASSYQLKQLEEQNARLKDALV RMRDLSSEKQEHVK\LQKLMKKNQLELVVRQQRERLQELLSQ AESTIDELKEQVDAALGAEMVEMLTDRNLNLEEKVRELRETVG DLEAMNEMNDELQENARETELELRBQDMAGARVREAQKRVEAA QETVADYQQTIKKYRQLTAHLQDVNREL TNQOEASVERQQQPPP ETPDFKIKFAETKAHAKAIEMELRQMEVAQANRHMSLLTAFMPD SFLRPGGDHDCVLVLLMPRLICKAELIRKQAEKFELESENCE RPGRLGAAGEQLSFAATGLVY\SLMPAAGHRYHRY*CHALSQCR LD\VYKKVGSLYPEMSAHERSLDFLIELLHKDQLDETNNVEPLT KAIKYVQHLYSIHLAEQPEDCTMQLADHIKFTQSALDCMSVEVG RLRAFLQGGQZATDIALLLRDLETSCS\DIRQFCKKIRRRMPGT DAPGIPAALAFGPQVSDTLLDCRKHILTWWVAVLQEVAAAAAQLI APLAENEGLLVAALEELAFKASEQIYGTTPSSSPYECLRQSCNII ISTMNK\LVTAMQEGEYDAERPPSKPPP\VELRAAALRAEITDA EGLGLKLEDRETVIKELKKSLLKIKGEELSEANVRLTLEKKLDS AAKNADERIEKVQTRLEETQALLRKKKEFEETMDALQADIDQL EAEKAEKQRLNSQSKRTIEGLRGPSPSGIATLVSGIAGEEQQR GAIPGQAPGSPVGPGLVKDSPLLLOQISAMRLHISQLQHENSIL KGAQMKASLASLPLHVAKLSHEGPGSELPAALYRKTSQLEET LNQLSTHTHVVDITRTSPAASPSAQLMEQVAQLKSLSDTVEKL KDEVLKETVSQRPGATVPTDFATFPSSAFLRAKEEQDDTVYMG KVTFSCAAGFGQRHRLVLTQEQQLHQLHSRLIS |
| 5377 | 762 | 1106 | DVPCRRVLPAAEQEKQQLTSCGESGEEG\F*YHEVRQAEGES* /WFGPNVRLVHTQLKTKKPSGTLKAKFY\HTGSTKFAARISCTK SS*WPGYDGGWGGQYIFIFRGMRWEEQP |
| 5378 | 2009 | 664 | QASGTTLRPLPDLPLQLKRRATSRRNALKPRGRVLMTSCLPAL RFIATPRLSAMPHIDNDVKLDFKDVLLRPKRSTLKSRSVDLTR |

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|------------|--|--|---|
| | | | SFSFRNSKQTYSGVPIIAANMDTVGTFEMAKVLCKSVPGSFWDPQMGCVFLIYKFLTKWKMLLSVLLPASILVAEKFSLFTAVH KHYSLVQWQEFAGQNPDCLEHLAASSGTGSSDFEQLEQILEAIP QVKYICLDVANGYSEHFVEFVKDVRKRFPQHTIMAGNVVTGEMV EELILSGADI IKVGIGPGSVCTTRKKTGVGYPQLSAVMECADA HGLKGHIISDGGCSCPGDVAKAFAGAGDFVMLGGMLAGHSESGG ELIERDGKKYKLFYGMSS*I\AM\KKYAGGVAEYRASEGKTVEV PFKGDVEHTIRDILGGIRSTCTYVGAARKLKLSSRRTTFRIVTQQ VNPIFSEAC |
| 5379 | 2009 | 664 | QASGTTLEPLPDLPQLKRREATSRNRALKPRGRLVMTSCLEAL RFIATPRLSAMPHIDNDVKLDFKDVLLRPKRSTLKSREVDLTR SFSFRNSKQTYSGVPIIAANMDTVGTFEMAKVLCKSVPGSFWDPQMGCVFLIYKFLTKWKMLLSVLLPASILVAEKFSLFTAVH KHYSLVQWQEFAGQNPDCLEHLAASSGTGSSDFEQLEQILEAIP QVKYICLDVANGYSEHFVEFVKDVRKRFPQHTIMAGNVVTGEMV EELILSGADI IKVGIGPGSVCTTRKKTGVGYPQLSAVMECADA HGLKGHIISDGGCSCPGDVAKAFAGAGDFVMLGGMLAGHSESGG ELIERDGKKYKLFYGMSS*I\AM\KKYAGGVAEYRASEGKTVEV PFKGDVEHTIRDILGGIRSTCTYVGAARKLKLSSRRTTFRIVTQQ VNPIFSEAC |
| 5380 | 2 | 2050 | PSRAGGAERGRAAAARSPPGSAAGWECPSVLDEAGACTMSSCVS SQPSSNRAPQDELGGRGSSSSSQKPCALRGLSSLSIHLGME SFIVVTECEPGCAVDLGLARDRPLEADGQEVPLDTSQSARPHL SGRKLSLQERSQGGLAAGGSLDMNGRCICPSLPYSPVSSPQSSP RLPRRPTVESHVHSITGMQDCVQLNQYTLKDEIGKGSYGVVKLA YNENDNTYYAMKVLSSKKLIRQAAPRRPPRGRTRPAPGGCQIP RGPI\EQVYQEI\ILKKLDHPNVV\KLVEVL\DDPNEDHLYMV F\ELVNQGPVMEVPTLKLPLSEDQARFYFDLKGIEYLYHQII H\RDIKPSNLLVGEDGHIKIADFGVSNFEKGSDDLNTVGTTPA FMAPESLSETRKIFSGKALDVWAMGVTLVCFVFG*CPFMDERIM CLHSKIKSQALEFPDQPIAEDLKDILTRMLDKNPESRIVPEI KLHPVWTRHGAEPLPSEDENCTLVEVTEEEVENSVKHIPSATV ILVKTMRKRSFGNPFEGSRREERSLSAPGNLLTKKPTRCESL SELKT*KISPLPACCKVT*EPPHPSGCRPSCWQPPFLHTHSQPR *PEPPRTDEALCPYETGRTCWAPLLQVLWWVGTPLPFLSTSWL PDLVGAPGSHFCFLNIALLRYSHTM |
| 5381 | 2 | 2050 | PSRAGGAERGRAAAARSPPGSAAGWECPSVLDEAGACTMSSCVS SQPSSNRAPQDELGGRGSSSSSQKPCALRGLSSLSIHLGME SFIVVTECEPGCAVDLGLARDRPLEADGQEVPLDTSQSARPHL SGRKLSLQERSQGGLAAGGSLDMNGRCICPSLPYSPVSSPQSSP RLPRRPTVESHVHSITGMQDCVQLNQYTLKDEIGKGSYGVVKLA YNENDNTYYAMKVLSSKKLIRQAAPRRPPRGRTRPAPGGCQIP RGPI\EQVYQEI\ILKKLDHPNVV\KLVEVL\DDPNEDHLYMV F\ELVNQGPVMEVPTLKLPLSEDQARFYFDLKGIEYLYHQII H\RDIKPSNLLVGEDGHIKIADFGVSNFEKGSDDLNTVGTTPA FMAPESLSETRKIFSGKALDVWAMGVTLVCFVFG*CPFMDERIM CLHSKIKSQALEFPDQPIAEDLKDILTRMLDKNPESRIVPEI KLHPVWTRHGAEPLPSEDENCTLVEVTEEEVENSVKHIPSATV ILVKTMRKRSFGNPFEGSRREERSLSAPGNLLTKKPTRCESL SELKT*KISPLPACCKVT*EPPHPSGCRPSCWQPPFLHTHSQPR *PEPPRTDEALCPYETGRTCWAPLLQVLWWVGTPLPFLSTSWL PDLVGAPGSHFCFLNIALLRYSHTM |
| 5382 | 1536 | 203 | GARGSQDAPALQEAEBVRGPRAQPARGRMTKARLRLWLVLGS VFMILLIIVYWDSSAGAAHFYLTHTSFSRPHGTGPPPLTPGDRDRE LTADSDVDEFLDKFLSAGVKQSDLPKRETEQPPAPGSMEEVSRG YDWSPRDARRSPDQGRQAERRSVLRGFCANSSLAFFPTKERPF DPNSELSHLIVDDRGAICYVVPKACTNWKRVIMVLGSLH RGAPYRDPLRIPREHVHNASAHLTFNKFWRRYKLSRHLMKVKL KKYTKFLFVRDPFVRLISAFRSKFELENEEF/*PQVRRHAAAV RQPHQPARLGARGLPRWPQ\VSFANFIQYLLDPHTEKLAPFNEH WRQVYRLCHPCQIDYDFVGKLETLDEDAQAQLQLQLQVLAAPLP |

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|------------|--|--|---|
| | | | PELPGTCPPSSWEEDWFAKIPLAWRQQLYKLYEADFVLFGVPKP ENLLRD |
| 5383 | 45 | 5250 | <p>VERLLGCRNSKRTWRMLISKNNPWRRLQGISFGMYSAEELKLS VKSITNPRYLDLGNPSANGLYDLALGPAADSKEVCSTCVQDFSN CSGLHGHIELPLTVYNPLLFDKLYLLLRGSCNLCHMLTTPRAVI HLLLCQLRVLEVGAQAVYELERILSRFLEENADPSASEIREEL EQYTTEIVQNNLLGSQGAHVKNVCESSKLIALLFWKAHMNAKRC PHCKTGRSVVRKEHNSKLTITFPAMVHRTAGQKDSEPLGIEAQ IGKRGYLTPTSAREHLSALWKNEGFFLNLYLFGSMDDDDGMSERFN PSVFFDLFLVPPSRSRPVSRLGDQMFINGQTVNLQAVMKDVVL IRKLLALMAQEQLPEEVATPTTDEEKDSLIAIDRSPLSTLPGQ SLIDKLYNIWIRLQSHVNIIVFDSEMDKIMMDKYPGIRQILEKKE GLFRKHHMGKRVDAARSVICPDMYINTNEIGIPMVFATKLTYP QVTPWNVQELRQAVINGPNVHEGASMVINEGSRALTASAVDMT QREAVAKQLLTPATGAPKPGTKIVCRHVKNKDILLNRQPTLH RPSIQAHRRARILPEEKVLRHLHYANCKAYNADPDGDEMNAHFPOS ELGRAEAYVLACTDQQLVLPKDGQPLAGLIQDHMVSGASMTTRG CFFTREHYMELVYRGLTDKVGKVKLLSPSILKPPFLWTGKQVVS TLLINIIPEDHIFLNLSGKAKITGKAWVKETPRSVPGFNPDSMC ESQVIRIEGELLCGVLDKAHYGSSAYGLVHCCEYIYGGTSGKV LTCLARLFTAYLQLYRGFTLGVEDILVKPKADVVRQRIIEESTH CGPQAVRAALNLEAASYDEVRGKQDAHLGKDQDFNMIDLKF KEVNVHYSNEINKACMPFGLHRQFPENTLQLMVQSGAGKSTVNT MQISCHIQIELEGRSTPLMASGKSLPCFEPYFTPRAGGFVTG RLTGTIKPPEFFHFCMAGREGLVDTAVKTSRSGYLQRCIIKHLE GLVVQYDLTVRDSGSSVQFLYGEDGLDIPKTFQFLQPKQFPFLA SNYEVIMKSQHLHEVLGRADPKKALHFRATKKWQSKHPNTLLR RGAFLSYSQKIQEAVKALKLESENRRGR/RPWDS/G/RMLRMWY ELDEBSRRKYQKAAACPDPSLSVWRPDYFASVSETFETKVDV YSQEWAAQTEKSYEKSELSLDRLRTLQL/KWQRLCEPGEAVG LLAAQSIGEPSTQMTLNTFH-AGRGEMNVTLGIPRLREILMVAS ANIKTPMMSVPLNLTKKALKRVKSLKKQLTRVCLGEVLQKIDVQ ESFCMEKQNKQFQVYQLRFQFLPHAYYQKEKCLRPEIDILRFMT RFFKLLMESIKKNNKASAFRNVTTRATQRDLNAGELGRSRG EQEGDEEBEGHIVDAEABEGDADASDAKRKEKQEEFVDYSESEE EEREGEENDEDDMQEERNPHREGARKTQEQDEEVL/GH*GGPV PSRPPDAAPETHPQPGAPGA\EAMERRVOAVREIHPFIDDYQYD TEESLWCQVTVKLPMLKINFDMSSLVVSLAHGAVIYATKGITRC LLNETTNKNEKELVLNTEGINLPELFKYAEVLDLRLRLYSNDIH AIANTYGI EAALRVIEKEIKDVFVAVYGIADVPRHLSLVADYMCF EGVYKPLNRRFGIRSNSSPLQMTTETS FQFLKQATMLGSHDEL R SPSACL VVGKVRGGTGLFELKQPLR</p> |
| 5384 | 196 | 886 | <p>QSCGQRLPTVL*L*GPPGSCPCILSLF\PGRPHALPEIRPYINI TILKQDKGDPGPMGLPGYMGREGPQGEFGPQSGDKGEMGSPG APCQKRFFAFSVGRKTALHSGEDFQTLLEFVFNLDGCFDMAT GQFAAPLRGIYFFSLNVHWSNYKETYVHIMHNQKBAVILYAQPS ERSIMQSQSVMLDLAYGDRVWVRLFKRQRENATYSNDFDTYITF SGHLIKAEDD</p> |
| 5385 | 326 | 799 | <p>LMVPRTKKEAPAPPKABAKAKAL\KAKKAVLKDVHSHKKNKIH SPTFRPKTL*LRRQPKYPWKSTPPRNKLDHVIKFPPLTTE*A VKKIENNSLLVFTVDVKANKHQIKQAVKK/LCDIDVAKVNTLIQ SDGERKAYVRLAPDYDALVVATKIGIT</p> |
| 5386 | 326 | 799 | <p>LMVPRTKKEAPAPPKABAKAKAL\KAKKAVLKDVHSHKKNKIH SPTFRPKTL*LRRQPKYPWKSTPPRNKLDHVIKFPPLTTE*A VKKIENNSLLVFTVDVKANKHQIKQAVKK/LCDIDVAKVNTLIQ SDGERKAYVRLAPDYDALVVATKIGIT</p> |
| 5387 | 2 | 2117 | <p>FVVAASGGCWFVLGERRAGSLLSASYGTFAMPGMVLFGRRAIA SDDLVPFGFELVVRVLLWVIGILTLYLMHRGKLDGAGALLSSY LILVLMILLAVVICTVSAIMCVSMRGITICNPGPRKSMSKLLYIRL ALFFPEMVWASLGAAWVADGVQCDRTVVNGIATVVVSWIIIAA TVVSIIIVFDPLGGKMAPYSSAGPSHLDSHSSQLLNLKLTAA</p> |

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|------------|--|--|--|
| | | | SVWETRIKLLCCCGIKDDHTRVAFSSSTAELEFSTYFSDTDLVPSD IAAGLALLHQQQDNIRNNQEPQVAVCHAPGSSQEAADLDAELKNC HHYMQFAAAAYGWPLYTYRNPGLTGLCRIGGCCRSKNPQMT/M VGGDQLQL/CTSAPILHTRAAVQGLHPRQLPWTRFTELPLVA LDHRKESVAVVAVRGTMQLQDVLTDLSAESEVLDVECEVQDRLAH KGISQAARYVYQRLINDGILSQAFSIAPEYRLVIVGSHLGGGAA ALLATMVRAAYPQVRCYAFSPRGLWSKALQEYSQSFTIVSLVLG KDVIPLSVTNLEDLKRRIILRVVAHCNPKYKILLHGLWYELFG GNFNNLTDELGGDQEVLTQPLLGEQSLLTRWSPAYSPSSDSPL DSSPKYPPLYPGRRIIHLQEEGASGRFGCCSAHYSAKWSHEAE FSKILIGPKMLTDHMPDILMRALDSVSDRAACVSCPAQGVSSV DVA |
| 5388 | 1569 | 753 | TADGGAGGGGRRQAGVRRHYLYPFTGGYRRRRAACQAEPAARS KDTDLAAYQKGNLGVQLRNMAQETNHSQVPMCLSTGCCFYGNPR TNGMCSVCYKEHLQRQNSNGRISPPVQCTDGSVPEAQSLDST SSSMQSPVSNQSLLESVASSQLDSTSVDKAVPETEDVQASVS DTAQQPSEEQSKSLE\NRNKKRIAVSCAGRKWDLLGLNAGVEMF TVVYTVTQMYTIALTITKQMLKNFVFOQEFKSPGSHQQLLEYK ILEHLQTKN |
| 5389 | 1569 | 753 | TADGGAGGGGRRQAGVRRHYLYPFTGGYRRRRAACQAEPAARS KDTDLAAYQKGNLGVQLRNMAQETNHSQVPMCLSTGCCFYGNPR TNGMCSVCYKEHLQRQNSNGRISPPVQCTDGSVPEAQSLDST SSSMQSPVSNQSLLESVASSQLDSTSVDKAVPETEDVQASVS DTAQQPSEEQSKSLE\NRNKKRIAVSCAGRKWDLLGLNAGVEMF TVVYTVTQMYTIALTITKQMLKNFVFOQEFKSPGSHQQLLEYK ILEHLQTKN |
| 5390 | 217 | 1332 | RDPRKLMEDKMWSECEGPEMSLVCLTDFQAHAREQLSKSTRDFI EGGADDSITRDDNIAAFKRIILRPYLRDVSVDTRTTIQGEEI SAPICIAPTGFHCLVWPDGEMSTARAAQAA\GICYITSTFASCS LEDIVIAAPEGRLWFQLYVHPDLQLNKLIQRVESLGFKALVIT LDTPVCGNRRHDIRNQLRRNLTLTDLSQPKKGNAPYFQMTPIIS TSLCWNDSLWFSQITRLPIILKGILTKEDAEAVKHNVQGIIVS NHGGRQLDEVLASIDALTEVVAAVKGKIEVYLDGGVRTGNDVLK ALALGAKCIFLGDAIILWALASKGBHGVKEVLNLTNEFHTSMA\ LTGCRSVAEINRNVLQFSRL |
| 5391 | 1 | 1292 | VKAAGSRGPPPTAGGQRCEAPGTVMERRLGVRAVWKENRGSGF QPPVCKNLMIQEQQLKVMFVGGPNTKRDYHIEEGEEVFYQLEGDM VLRVLEQGHKRDVIRQGEIFLLPARVPHSPQRFANTVGLVVER RRLETELDGLRYVVGDTMDVLFKWFYCKDLGTQLAPIIQEFFF SEQYRTGKPIPDQLLKEPPFPLSTRSIMEPMSLDAWLDSHREL QAGTPLSLFGDTYETQVIAYGQSSSEGLRQNVVDVWLWQLEGSSV VTMGGRLSLGPWMDSLVLVSWGPSY\AW\ERTQGSVALSVT\Q DPACKKSPWGEPSCHGLKAATGVPSTLEVPSPNNSPSPHYLSV YCRVPHRPAHCCHPPSCPSQPRCHAPGRAAAPHLWQTQPTAL PVLPGGLPPAPLLPIPLSLQTCSTSTPRRPSIKAS |
| 5392 | 1 | 1623 | IRGSNAQKVVVGASGSGGAGPQDPDAGPGGVPALAAVLAGACEPR CAAPCPLPALSRGAGSRGSRGRCAGSGDAAAAEEWIRKGS FIHKPAHGWLHPDARVLGPGVSVVVRVMGCTEVLRSMSRLDFNT RTQVTREAINRLHEAVPGVRGSKKKAPNKALASVLGKSNLRF GMSISIHISTDCLSLSPATRVIANIHMPISIFASGGDTMDT YVAYVAKDPINQRACHILECCEGL\AQSIISTVGQAFELRFKQY LHSPPKVALPPERLAGPEESAWGDEEDSLEHNYNSIPGKEPPL GGLVDSRLALTQPCALTALDQGPSPLRDACSLPVDVGSTGTAP PGDGYQADARGPPDHEEHLYVNTQQLDAPEPEDSPKKDLDFMR PFEDALKLHECSVAAGVTAAPLPLEDQWPSPTTRRAPVAPTEEQ LRQEPWYHGRMSRRAAERMLRADGDFLVRDSVTNFGQVYLTGMH AGQPKHLLVDEPGVVRTKDVLFESISHLIDHHLQNGQP IVAAE SELHLRGVVSREP |
| 5393 | 2 | 982 | GGDSAGMTMETQMSQNVCPNRLWLQLTFLVLLLASADSQAAP PKAVLKLEPPWINVLQ\EDSVTLTCQCAPQ/ERSDSIQWFHNG |

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|------------|--|--|---|
| | | | \NLIPHTHTQPS\YRFKANN\DSGEYTCQTGOTSL\SDPVHLTV LSEWLVLQTPHLEFQEGETIMLRCHS\WRDKP\LVKVTFQNGK SQKFSLDPTFSIPQANHSHSGDYHCTGNIGYTLFSSKPVITITV QVPSMGSSSPMGIIVAVVIATAVAIAAVALIYCRKKRISAN STD PVKAAQFEPGRQMIATIRKQLEETNNDYETADGGYMTLNP RAPTD DDKNIYLTLPNDHVNNSN |
| 5394 | 2 | 982 | GGDSAGMTMETQMSQNVCPRLWLLQPLTVLLLASADSQAAP PKAVLKLEPPWINVLQ\EDSVILTCQGAPQ/ERSDSIQWFHNG \NLIPHTHTQPS\YRFKANN\DSGEYTCQTGOTSL\SDPVHLTV LSEWLVLQTPHLEFQEGETIMLRCHS\WRDKP\LVKVTFQNGK SQKFSLDPTFSIPQANHSHSGDYHCTGNIGYTLFSSKPVITITV QVPSMGSSSPMGIIVAVVIATAVAIAAVALIYCRKKRISAN STD PVKAAQFEPGRQMIATIRKQLEETNNDYETADGGYMTLNP RAPTD DDKNIYLTLPNDHVNNSN |
| 5395 | 3135 | 531 | RASDAKNQEGLLNTRRKSTDSVPISKSTLSRSLSLQASDFDGAS SSGNPEAVALAPDAYSTGSSSASSTLKRTKKPRPPSLKKKQTTK KPTETPPVKETQOEPEDESLVPSGENLASETKTESAKTEGSPSPA LLEETPLEPAAGPKAACPLDSESVEGVVPPASGGGRVQNSPPVG RKTLPITTAPEAGEVTPSDSGGQEDSPAKGHSVRLEFDYSEDKS SWDNQQENPPPTKKIGKKPVAKMPLRRPKMKKTPEKLDNTPASP PRSPAEPNDIPIAKGTYTFDIDKWDPNFNFSSSTSKMQESPPL PQQSYNFDPDTCDESVDPFKTSKTPSSSPKSPASFEIPASAME ANGVDGDGLNKPAAKKKTPLKTDTRFVKKSPKRSPLSDPPSQDP TPAATPETPPVISAVVHATDEEKLAVTNQKWTCTMTVDLEADKQD YPQPSDLSTFVNETKFSSPTEELDYNRSYEIEYMEKIGSSLPQD DDAPKKQALYLMFDT3QESPVKSSPVRMSEPTPCSGSSFEETE ALVNTAAKNQHPVPRGLAPNQESHQVPEKSSQKELEAMGLGTP SEAIEITAPEGSFASADALLSRLAHPVSLCGALDYLEPDLAENK PPLFAQKLQREAAHPTDVSISKALYSRIGTAEVEKPAGLLFQQ PDLDLSALQIARAEIITKEREVSEWKDKYEESRREVMEMRKIVAE YEKTIAMIEDEQREKSVS\HQT VQQLVLEKEQA\LDLNSVEK \SLADLFRRYEKMKEVLEGFRRKNEEVLKRCQBYLSRVKKEEQR YQALKVHA\EEKLDRANAE\IAQVRGKAQOEQAHAQASLAERSS CRV\DALERTLEQKNKEIEELTKICDELIAKMGKS |
| 5396 | 3135 | 531 | RASDAKNQEGLLNTRRKSTDSVPISKSTLSRSLSLQASDFDGAS SSGNPEAVALAPDAYSTGSSSASSTLKRTKKPRPPSLKKKQTTK XPTETPPVKETQOEPEDESLVPSGENLASETKTESAKTEGSPSPA LLEETPLEPAAGPKAACPLDSESVEGVVPPASGGGRVQNSPPVG RKTLPITTAPEAGEVTPSDSGGQEDSPAKGHSVRLEFDYSEDKS SWDNQQENPPPTKKIGKKPVAKMPLRRPKMKKTPEKLDNTPASP PRSPAEPNDIPIAKGTYTFDIDKWDPNFNFSSSTSKMQESPPL PQQSYNFDPDTCDESVDPFKTSKTPSSSPKSPASFEIPASAME ANGVDGDGLNKPAAKKKTPLKTDTRFVKKSPKRSPLSDPPSQDP TPAATPETPPVISAVVHATDEEKLAVTNQKWTCTMTVDLEADKQD YPQPSDLSTFVNETKFSSPTEELDYNRSYEIEYMEKIGSSLPQD DDAPKKQALYLMFDT3QESPVKSSPVRMSEPTPCSGSSFEETE ALVNTAAKNQHPVPRGLAPNQESHQVPEKSSQKELEAMGLGTP SEAIEITAPEGSFASADALLSRLAHPVSLCGALDYLEPDLAENK PPLFAQKLQREAAHPTDVSISKALYSRIGTAEVEKPAGLLFQQ PDLDLSALQIARAEIITKEREVSEWKDKYEESRREVMEMRKIVAE YEKTIAMIEDEQREKSVS\HQT VQQLVLEKEQA\LDLNSVEK \SLADLFRRYEKMKEVLEGFRRKNEEVLKRCQBYLSRVKKEEQR YQALKVHA\EEKLDRANAE\IAQVRGKAQOEQAHAQASLAERSS CRV\DALERTLEQKNKEIEELTKICDELIAKMGKS |
| 5397 | 3135 | 531 | RASDAKNQEGLLNTRRKSTDSVPISKSTLSRSLSLQASDFDGAS SSGNPEAVALAPDAYSTGSSSASSTLKRTKKPRPPSLKKKQTTK KPTETPPVKETQOEPEDESLVPSGENLASETKTESAKTEGSPSPA LLEETPLEPAAGPKAACPLDSESVEGVVPPASGGGRVQNSPPVG RKTLPITTAPEAGEVTPSDSGGQEDSPAKGHSVRLEFDYSEDKS SWDNQQENPPPTKKIGKKPVAKMPLRRPKMKKTPEKLDNTPASP PRSPAEPNDIPIAKGTYTFDIDKWDPNFNFSSSTSKMQESPPL |

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|------------|--|--|--|
| | | | PQQSYNFDPDTCDESVDPPFTSSKTPSSPSKSPASFETPASAME ANGVDGDGLNKPAAKKKTKPLKTDTRVVKKSPKRSPLSDPPSQDP TPAATPETPPVISAVVHATDEEKLAVTNQKWTCTMTVDLEADKQD YPQPSDLSTFVNTEKFSSPTEELDYRNSYEIEYMEKIGSSSLPQD DDAPKKQALYLMFDTSQESPVKSSPVRMSSEPTPCSGSSFEETE ALVNTAAKNQHPVPRGLAPNQESHQVPEKSSQKELEAMGLGTP SEAIETAPEGSFASADALLSRLAHFVSLCGALDYLEPDLAEN PPLFAQKLQREAAHPTDVISKTALYSRIGTAEVEKPAGLLFFQQ PDLDSALQIARAETITKEREVSEWKDKYEESSRREVMEMRKIVAE YEKTIAQMIEDEQREKSVS\HQT VQQLVLEKEQA\LDLNSVEK \SLADLFRRYEKMKEVLEGFRKNBEVLKRCQAEYLSRVKKEEQR YQALKVHA\EEKLDRANAE\IAQVRGKAQQEQAAHQASLAERSS CRV\DALERTLEQKNKEIEELTKICDELIAKMGKS |
| 5398 | 56 | 5426 | SGEVCRMESNENQEGVPRPSYVFSADP*ARPSEINFDDGKLDLS HEFSLVAPNTEANSFESKDYLVQCLIRIPFTQSEKELESEGCVH ILDSQTVVLKEPQCILGRLSEKSSG\QM\AQKFSFFPGFLGPAT TQKEFFQGCIMHP\VKDLLKGQSRIFTYGLTNSGKTYTFQGT ENIRILPRTLNLVFDLSQERLYTKMNLKPHRSRHYLRLSSEQEK EEIASKSALLRQIKEVTVHNDSDDTLTGLTNSLNLISFEESIK DYEQANLNMANSIKFSVWVSFFETIYNEYIYDLFVPVSSKFQKKK MLRLSQDVGKYSFIKDLQWIQVSDSKEAYRLKLGKIKHQSVAFT KLNNASSRSHSIPTVKILQIEDSEMSRVIRVSELSLCLAGSER TMKTQNEGERLRETGNINTSLTLGKCINVLKNSEKSKFQQHVP FRESKLTHYF/QSFFNGKGKICMIVNISQCYLAYDETNLVLFKS AIAQKVCVPTLNSSQEKLFGPVKSSQDVSDLSNSNSKILNVKR ATISWENSLRDLMEDEDLVEELENAEETED/VGETKLLDEDLK TLEENKAFISHEEKRLDLIEDLKKKLINEKKEKLTLEFKIRE EVTQEBTQYWAQREADFKEITLLQEREILEENAEERLAFKDLVG KCDTREAAKDICATKVETEEATACLELKFNQIKAEAKTKGEL IKTKEELKKRENESSLIQELETSNKKIITONQRIKELINIDQ KEDTINEFQNLKSHMENTFKCNDKADTSSLIINNKLICNETVEV PKDSKSKICSEKRVNENELQDEPPAKKGSIHVSSAITEDQKK SEEVPRNIAETIEDIRVLQENNEGLRAFLLTIEENELKNEKEEKAE LNKQIVHFQQELSLSEKKNLTLSKEVQQIQSNYDIAIAELHVQK SKNQEQEEKIMKLSNEIETATRSITNNVSQIKLMHTKIDELRTL DSVSQISNIDLNLRLDLSNGSEEDNLPTQLDLDLNDYLVSKQV KEYRIQEPNRENSFHSSIEAIWECKETIVKASSKSHQIEELEQ QIEKLQAEVKGKIDENNRLEKEHEKNQDDLKEKETLIQQLKEE LQEKNTLDVQIQHVVEGKRALSELTOGVTCYAKIKELETILE TQKVERSHSAKLEQDILEKESIILKLEBNLKEFQEHLDQSVKNT KDLNVKELKLKEEITQLTNNLQDMKHLQLKEEEEEETNRQETEK LKEELSASSARTON\LNADLQKREEDYADLKEKLTDAKKQIKQV QKEVSVMRDEDKLLRIKINELEKKKNQCSQELDMQR\TIQQLK EQLINQKVEEAIQQYERACKDLNVKEKIIDMRMTLEBEQEQTV EQDQVL\BAKLEEVERLATELDRWRVKCNDELTKNNQORSNKEHE NNTDVLGKLTNLQDELQSEQKYNADRKKWLEEKMLITQAKEA ENIRNKEMKKYAEDRERFFKQONEMEILTAQTEKSDLDQKWR ERDQLVAALEIQLKALISSNVQKDNEIEQLKRIISETSKIETQI MDIKPKRISSADPKLQTEPLSTSFETSRNKIEDGSSVLDSEV STENDQSTRFPKPELEIOFTPLQPNKMAVKHPGCTTPVTVKIPK ARKRKSNEEEDLVKCNKNATPRTNLKFFISDDRNSSVKKEQ KVAIRPSSKKTYSLSQASIIIGVNLATKKKECTLQKFGDFLQHS PSILQSKAKKIIETMSSSKLSNVEASKENVSQPKRAKRKLYTSE ISSPIDISQGVILMDQKMKESDHQIIKRRLRTKTA |
| 5399 | 705 | 230 | GPRMAKFLSQDQINEYKECFSLYDKQQRGKIKATDLMVAMRCLG ASPTPGEVQRHLQTHGIDNGELDFSTFLTIMHMQIKQEDPKKE ILLALMVDKEKKGYVMASDLRSKLTSLGKLTTHKEV\DDLRE \ADIEPNGKVKYDEFIHKITSYLDGTY |
| 5400 | 931 | 248 | SHCSSGMEIPPTNYPASRAALVAQNYINYQQTGPHRVFEVQKVK QASMEDIPGRGHKYRLKFAVEEIIQKQVKVNCTAEVLYPSTGQE TAPEVNFTFEGETGKNPDEEDNTFYQRLKSMKEPLEAQNI\PDN |

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|------------|--|--|--|
| | | | FGNVSPMTLVHLAWVACGYIIWQNSTEDTWYKMKIQTIVKQV QRNDDFIELDYITILLHNIASQEIIPWQMQLWHPQYGTVKVHNS RLPKEVQLE |
| 5401 | 3 | 1360 | TGWSYGPPTSLAFLAPRDFFPKLLIHPQAVVRLSCGAGSMGS QAAAEWRNWNASWEGSSSLSGCSMGCFKDDRIVFTWTFSTYFME KWAPRQDDMLFYVRRKLAYSGSESGADGRKAABEEVEVEVYRRD SKKLPGLGDPDIDWEEVCLNLILQKLDYMTCAVCTRADGGDI HIIKKKSQQVFASPSKHPMDSKGEESKISYPNIFFMIDSF\BE\ VFSDMTVGKGMVCVELVASDKTNTFQGVIFQGSIRYEALKKVY DNRVSVAAARMAQK\MSFGFSKYSNMEF\VR\MKGPQKGHAEMA VSRVSTGDTSPCGTEEDSSPASPHERVTSFSTPPTPERNNRPA FFSPSLKRVPRNRIAEMKKSHSANDSEFFREDDGGADLHNAT NLRSLSGTGRSLVGSWLKLNADGNFLLYAHLTYVTLPPLHRI LTDILEVRQKPIIMT |
| 5402 | 3445 | 1563 | GECFIMAADVQNDLVFEFASNVMEDEQLGDPPIFPAVIVEHV PGADILNSYAGLACVEEPNDMITESSLDVAEEI IDDDDDITL TVEASCHDGETIETIEAAEALLNMDSPGPMLEKRIINNIFSS PEDDMVAVPVTHVSVTLGDIPEVMETQQVQEKYADSPGASSEFQ PKRKKGRKTKPPRPDSPATTPNISVKKKNKDGKGNITLYLWEFLL ALLQDKATCPKYIKWTQREKGIKFLVDSKPVSRWLWRKHKNKP\ D MNYEPMGRALRYYYQRGILAKVEGQRLVYQFKEMPKDLIYINDE DPSSSIESSDPSLSSSATSNNQTSRVRVSSSPGVKGGATTVLK PGNSKAAKPKDPVEVAQPSEVLRTVQPTQSPYPTQLFRTVHVVO PVQAVPEGEAARTSTMQDETINSSVQSIR\TIQAPTQVPVVVSP RNQQ\LHTVTLQTVPLTTVIASTDPAGTSGSKFILAIPSSQP MTVLKENVMLQSQKAGSPPSIVLGPV\QVLTSTNVQTCNGT VSV\ASSPSFS\ATAPVVTLFLLGSSQLVAHPPGTVITSVIKTQ ETKTLTQVEKKESEDHLKENTEKTEQQPQPYVMVSSSNGFTS QVAMQNELLEPNSE |
| 5403 | 3445 | 1563 | GECFIMAADVQNDLVFEFASNVMEDEQLGDPPIFPAVIVEHV PGADILNSYAGLACVEEPNDMITESSLDVAEEI IDDDDDITL TVEASCHDGETIETIEAAEALLNMDSPGPMLEKRIINNIFSS PEDDMVAVPVTHVSVTLGDIPEVMETQQVQEKYADSPGASSEFQ PKRKKGRKTKPPRPDSPATTPNISVKKKNKDGKGNITLYLWEFLL ALLQDKATCPKYIKWTQREKGIKFLVDSKPVSRWLWRKHKNKP\ D MNYEPMGRALRYYYQRGILAKVEGQRLVYQFKEMPKDLIYINDE DPSSSIESSDPSLSSSATSNNQTSRVRVSSSPGVKGGATTVLK PGNSKAAKPKDPVEVAQPSEVLRTVQPTQSPYPTQLFRTVHVVO PVQAVPEGEAARTSTMQDETINSSVQSIR\TIQAPTQVPVVVSP RNQQ\LHTVTLQTVPLTTVIASTDPAGTSGSKFILAIPSSQP MTVLKENVMLQSQKAGSPPSIVLGPV\QVLTSTNVQTCNGT VSV\ASSPSFS\ATAPVVTLFLLGSSQLVAHPPGTVITSVIKTQ ETKTLTQVEKKESEDHLKENTEKTEQQPQPYVMVSSSNGFTS QVAMQNELLEPNSE |
| 5404 | 187 | 1111 | LPVTLIFAKMKTLOSTLLLLLVPLIKPAPPTQQDSRIIYDYG T DNFEESIFSQDYEDKYLDGKNIKEKETVIIPNEKSLQLOKDEAI TPLPPKKNDEMPTCLLCVCLSGSVYCEEVDIDAVPPLPKESAY LYARFNKIKKLT\AKDFADIPNLRRLDFTGNLIEDIEDGTFSKL SLVEELSLAENQLLKLPLVLPKLTLENAKYNKIKSRGIKANAFK KLNNTLFLYLDHNALESVPLNLPESIRVILHLQFNNIASITDDTF CKANDTSYIRDRIEERLEGNPIVLGKHPNSFICLKRLPIGSYF |
| 5405 | 2199 | 1220 | QNSRSLHMDPQNHGSGSSLVVVIQQPSLDSRPLDYEREIQPTA TSLDQIKAIRGSNEYTEGSPVVKRPAPRTAPRQEKHERTHEII PINVNNNYEHRHTSHLGHAVLPSNARGPILSRSTSTGSAASSGS NSSASSEQGLGRSPPTRPVPGHRSERARTQPKQLIVDDLKGS LKEDLTQHKFICEQCGKCKGECTAPRTLPSCCLACNRQCLCSAE SMVEYGTMCML\VKGI FYHCSNDDEGDSYSDNPSCSCSQSHCCSR YLCMGAMSLFLPCLLCYPPAKGCLKLCRRCYDWIHRPGCRCKNS NTVYCKLESCPSRGQCKPS |
| 5406 | 279 | 2732 | RWRTYNVEGPLTFMDVAIEFCLEEWQCLDTAQQNLYRNVMLENY |

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|------------|--|--|--|
| | | | RNLVFLG/I IAVSKPDLITCLBQKEKEPWEPMRRHEMVAKPFPVVC SHFTQDFWPEQHIKDPFQKATLRRYKNCHEKNVHLKKDHKSVD E CKVHRGGYNGFNQCLPATQSKIFLFDKCVKAFHKFSNSNRHKIS HTEKKLFFKCECKGSFCMLSHLAQHKKI IHTRVNFCCKEKGKAF NCPSI ITHKRI NTGEKPYTCCECGKVFVNWSRLTTHKKNYTRY KLYKCEECGKAFNKSS I LTHKKI IRTGEKIFYKCECAKAFNQSS NLTEHKKIHPGEKPYKCEECGKAFNWPSTLTTHKKRIHTGEKPYT CEECGKAFNQFSNLTHKKRIHTA\ EKIFYKCTECGEAFSRS \SNL TKHKEIHTKPKPYKCEECGKAFKWSKLTEHKLTHTEGKPYKCE KCGKAFNCPSSI ITHNRINTGEKPYTCCECGKVFVNWSRLTTHK KNYTRYKLYKCEECGKAFNKSS I LTHKKI IHTGEKIFYKCEECG KAFKWSKLTEHKLTHTEGKPYKCEECGKAFNHS I LTHKKRIHT GBKPYKCEECGKAFNQSSNLTHKKI IHTGEKIFYKCEECGKAF TQ SSNLTHKKI IHTGGKPYKCEECGKAFNQFSTLTTHKKI IHTGEK PYKCEECGKAFKWSSTLTTHKKI IHTGEKPYKCEECG \KAFKLSST LSTHKKI IHTGEKPYKCEKCGKAFNRP SNL I EHKI IHTGEQPYK CEECGKAFNYSSHLNTHKKRIHTKEQPYKCEECGKAFNQYSSNLTH NKIHTGKLYKPEDVT I LITTPQTFSN I K |
| 5407 | 3 | 659 | RPRRRQSSCCTGWLAGWLLRAAFRCRRRTETDMEQKGGLAVL I L A I I L L Q G T L A Q S I K G N H L V K V Y D Y Q E D G S V L L T C D A E A K N I T W F K D G K M I G F L T E D K K K W N L G S N A K D P R G M Y Q C K G S Q N K S K P L Q V Y Y R M C Q N C I E L N A A T I S G F L F A E I V S I F D L A V G V Y F I A G T G M E F R Q S \ R A S D K Q T L L P \ N D P A P T Q P L K D P R K M T Q Y S H L Q G N \ Q L R R N |
| 5408 | 2745 | 6128 | QGSKGTCHPQAQQPWDEGVWQEAPSQSEPWGQSQEPPTMPQRLP HARQHTPLPLGSADYRRVVSVRPQGPDRDPKDSRDAAKREQGS L APRPVFASRGGKTLCKGYRQAPPGPFAQFQRP ICSASPPWASRF STPCPGGAVREDTYPVGTQGVPSLALAQGGPQGSWRFLWKSM P RLPTDLDIGGPWFPHYDFERSCWVRAISQEDQLATCWQAEHCGE VRNKDMSWPEEMSFIANS SKIDRHKVPTKGGATGLSNLGN TCFM NSSIQCVSNTQPLTQYFISGRHLYELNRTNPIGMKGHMAKCYGD LVQELWSGTQKNVAPLKLRTI AKYAPRFNGFQQQDSQELLAF L LDGLHEDLN RVHEKPYVELKDSGRPDWEVAAEAWDNHLRRNR S I V V D L F H G Q L R S Q V K C K T C G H I S V R F D P F N F L S L P L P M D S Y M H L E I T V I K L D G T T P V R Y G L R L N M D E K Y T G L K K Q L S D L C G L N S E Q I L L A E V H G S N I K N F P Q D N Q K V R L S V S G F L C A F E I P V P V S P I S A S S P T Q T D F S S S P S T N E M F T L T T N G D L P R P I F I P N G M P N T V V P C G T E K N F T N G M V N G H M P S L P D S P F T G Y I I A V H R K M M R T E L Y F L S S Q K N R P S L F G M P L I V P C T V H T R K K D L Y D A V W I Q V S R L A S P L P P Q E A S N H A Q D C D S M G Y Q Y P F T L R V V Q K D G N S C A W C P W Y R F C R G C K I D C G E D R A F I G N A Y I A V D W H P T A L H L R Y Q T S Q E R V D E H E S V E Q S R R A Q V E P I N L D S C L R A F T S E E L G E N E M Y C S K C K T H C L A T K K L D L W R L P P I L I I H L K R F Q F V N G R W I K S Q K I V K F P R E S F D P S A F L V P R D P A L C Q H K P L T P Q G D E L S E P R I L A R E V K K V D A Q S S A G E E D V L L S K S P S S L S A N I I S S F K G S P S S R K S G T S C P S S K N S S P N S S P R T L G R S K G R L R L P Q I G S K N K L S S S K E N L D A S K E N G A G Q I C E L A D A L S R G H V L G G S Q P E L V T P Q D H E V A L A N G F L Y E H A C G N G C C N G Y S N G Q L G N H S E E D S T D D Q R E D T R I K P I Y N L Y A I S C H S G I L G G G H Y V T Y A K N P N C K W Y C Y N D S S C K E L H P D E I D T D S A Y I L F Y E Q Q G I D Y A Q F L P K T D G K K M A D T S S M D E D F E S D Y \ E K Y C V L Q |
| 5409 | 2745 | 6128 | QGSKGTCHPQAQQPWDEGVWQEAPSQSEPWGQSQEPPTMPQRLP HARQHTPLPLGSADYRRVVSVRPQGPDRDPKDSRDAAKREQGS L APRPVFASRGGKTLCKGYRQAPPGPFAQFQRP ICSASPPWASRF STPCPGGAVREDTYPVGTQGVPSLALAQGGPQGSWRFLWKSM P RLPTDLDIGGPWFPHYDFERSCWVRAISQEDQLATCWQAEHCGE VRNKDMSWPEEMSFIANS SKIDRHKVPTKGGATGLSNLGN TCFM NSSIQCVSNTQPLTQYFISGRHLYELNRTNPIGMKGHMAKCYGD LVQELWSGTQKNVAPLKLRTI AKYAPRFNGFQQQDSQELLAF L LDGLHEDLN RVHEKPYVELKDSGRPDWEVAAEAWDNHLRRNR S I V V D L F H G Q L R S Q V K C K T C G H I S V R F D P F N F L S L P L P M D S Y M H L E I T V I K L D G T T P V R Y G L R L N M D E K Y T G L K K Q L S D L C G L N S E Q I L L A E V H G S N I K N F P Q D N Q K V R L S V S G F L C A F E I P V P V S P I S A S S P |

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|------------|--|--|---|
| | | | TQTDFFSSPSTNEMFTLTNGDLPRPFIPIPNMGMPNTVVPCTGTEK NFTNGMVNCHMPSLPDSPFTGYIIAVHRKMMRTELYFLSSQKNR PSLFGMPLIVPCTVHTRKKDLVDVAVIQVSRSLASPLPPQEASNH AQDCDDSMGYQYPFTLRVVQKDGNSCAWCPWYRFCRGCKIDCGE DRAFIGNAYIAVDWHPALHLRYQTSQERVVDHEHSEVQSRRQAQ VEPINLDSCLRAFTSEELGENEMYCCKCKTHCLATKKLDLWR LPPILIHLKRFQFVNGRWIKSQKIVKFPRESFDPASFLVPRDP ALCQHKPLTPQGDELSEPRILAREVKKVDAQSSAGEEDVLLSKS PSSLSANIISSPKGSFSSSRKSGTSCPSKNSSPNSPRTLGRS KGRRLPLQIGSKNKLSSSKENLDASKENGAGQICELADALSRLGH VLGGSQPELVTPQDHEVALANGFLYEHEACNGCGNGYSNGQLG NHSEEDSTDDQREDTRIKPIYNLYAISCHSGILGGGHVYTYAKN PNCKWYCYNDSSCKELHPDEIDTDSAYILFYEQQGDIDYAFPLPK TDGKKMADTSSMDEDFESDY\EKYCVLQ |
| 5410 | 2 | 710 | LRPPGQARHVLAARMQAPHKEHLYKLLVIGDLGVGKTSITKRY VHQNFSSHYRATIGVDFALKVLHWDPEVTVVRLQLWDIAGQERFG NMTRVYYREAMGAFIVFDVTRPATFEAVAKNKNDLDSKLSLPPNG KPVSVLLANKCDQKDVLMNNGLKMDQFCHEHGFVGFETSAK ENINIDEASRCLVKHILANECDLMESI EPDVVKPHLTSTKVASC SG\CAKILVGT FAGVW |
| 5411 | 1302 | 289 | TGPAAAGRRKALGSFGKPSPTGLRAARRRRTRPSAPAAPSVC GKRRESDAGAGGERASVRTGSGRRGGRTMAGDSEQTLQNHQPN GGEPFLIGVSGGTASGKSSVCAKIVQLLGQNEVDYRQKQVILS QDSFYRVLTSEQKAKALKGQFNFDHPDAFDNELILKTLKETEG KTVQIPVYDFVSHSRKEETVTVYPADVVLFEGLAFYQSQR/IR DLFQMKLFVDTDADTRLRRLVLDKISERGRDLEQLSSSTLRV KPA\FEEFCLPPK\KYADVIPR\GADN\RVPINLIVQHIQ\DI LNGGGS\NRQTNGCLNGYTSPSRKQASESSSRPH |
| 5412 | 3180 | 313 | QGISNFFHKEANFWFEVSGYLISPLRSPFVDFALEWSLMASPNW KMEGESSRFEIHTPVSDKKKKKCSIKHERPQKHSHEIFRDSLLV NEQSQITRRKKRKKDFQHLISSPLKKSRIKDETANATSTLKKRK KRRYSALLEVDEEAGVTVVLVDKENINNTPKHFRKDVDVVCVDM IEQKLPK\PKTDKFQVLAKSH\AHKSEALHSKVREKKNKKHQR KAASWESQRA\RDTLQSEFP\QESWLSVGPGEITEL\ASA HKNSKKKKKKSSNREYET\LAMPEGSQAGREAGTDMQESQPTV GLDDETPQLLGP THKKSKKKKKKSNHQEFESLAMEGSQVGS EVGADMQES\RPVGLHGETAGIPAPAYKNKSKKKKKSNHQEF EAVAMPESLESAYPEGSQVGSVEGTVEGSTALKGFESNSTKKK SKKRKLTSVKRARVSGDDFSVPSKNSESTLFDVSEGDGAMMEEG VKSRRPQKKTQACLASHVQEAAPLEPANEHNVETAEDSEIRY LSADSGDADSDADLGSVAVKQLQEFIPNIKDRATSTIKRMYRDD LERFKEFKAQGVAKFGKFSVKENKQLEKNVEDFLALTGIESAD KLLYTDRYPEEKSVITNLKRRYSFRLHIG\RNIRPWKLIYYRA KKMFVNNYKGRYSEGDTKLKMYHSLGNDWKTIGEMVARRSL SVALKFSQISSQRNRGAWSKSETRKLIKAVEBIVLKKMSPELKL EVDKSLQENPESCLSIVREKLYKGISWVEVAKVQTRNWMQCKS KWTEILTTRMTNGRRIYYGMNALRAKVSLEIRLYEINVEDTNEI DWEDLASAIGDVPPSYVQTKFSRLKAVYVFPWQKKTFFPIIDYL YETTLPLLKEKLEKMEKKGTQIQTAPAAPQVFPFRDIFYEDD SEGGGHRKRRRPRRHAWFTPVIPVLWEAKAGWII |
| 5413 | 3753 | 1304 | RFPAGVAPRRAMANSKKVSWSGRDRDDEBAAPILRRRTARPGGG TPLNGAGPGAARQSPRSALFRVGHMSSVKLDDELLEP\DMDDP HPFPKEIPHNEKLLSLKYESLDYDENSENLFLBERRINHATAFR TVEIKRWVICALIGILTGLVACFIDIVVENLAGLKRYVIGKNID KFTKGGLSFSLLLWATLNAAFVLVGSVIVAFIEPVAAGSGIPQ IKCFLNGVKIPHVVRLKTLVIKVSGLSVVGGGLAVGKEGPMIH SGSVIAAGISQGRSTSLKRDFKI FEYLRDTEKRDVFSAGAAAG VSAAFGAPVGGVLFSLLEEGASFVNQFLTWRIFASMISTFTLNF VLSIVHGNMWDLSSPGLINFRFDSEK MAYTIHPIPVFIAMGVV GGVLGAVFNALNYWLTMFIRYIHRPCLQVIEAVLVAAVTATVA FVLIYSSRDCQPLQGGSMSYPLQLFCADGEYNSMAAFAFNTPEK |

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|------------|--|--|--|
| | | | SVVSLFHDPPGSYNPLTLGLFTLVYFFLACWTYGLTVSAGVFIP SLLIGAAGWGRLEFGISLSVLTGAAIWADPGKYALMGAAQLGGIV RMTLSLTVMMEATSNVTYGFPIMLVLMATAKIVGDVFIGLYDM HIQLQSVFPLHWEAPVTSLSLTAREVMSTPVTCLRRREKVGIV DVLSDTASNHNHGFVVEHADDTQPARLQGLILRSQILVLLKHKV FVERSNLGLVQRRLRLKDFRDAXPRFPPIQSIHVSQDERECTMD LSEFMNPSPYTVPQEASLPRVFKLFRALGLRHLVVVDNRNQVVG LVTRKDLARYRLGKRGLEELSLAQT |
| 5414 | 2130 | 390 | GVASAWDRALFSPILLSPTSRVFTSPPRCVSTETGRRDRARVPS QWCSVLQGLKLPVSGRTSLACVRSILLSPASSPRKVGIVGGTGAR AGAAPRDHGRVRRHRRPSSARRMTRTTGQCLAPRGCCGPRGRTRSP RSRPSRTRRGCSASPACLP/CRSALIVAVLCYINLLNYMDRFTV AGVLPDIEQFFNIGDSSSGLIQTQVFISSYMLAPVFGYLGDRYN RXYLMCGGTAFWSLVTLGSSFPGEHFWLLLLTRGLVGVGEASY STIAPTLLADLFVADQSRMRLSIFYFAIPVGSGLGYIAGSKVKD MAGDWHWALRVTPGLGVVAVLLLFVVREPPRGAVERHSDLPPL NPTSWWADLRALARNPSFVLLSLGFTAVAFVTGSLALWAPAFLL RSRVVLGETPPCLPGDSCSSSDSLIFGLITCLTGVLGVGLGVEI SRRLRHSNPRADPLVCATGLLGSAPFLFSLACARGSIVATYIF IFIGETLLSMNWAIVADILLYVVIPTRRSTAEAFQIVLSHLLGD AGSPYLIGLISDRLRNWPSPFLSEFRALQFSLMLCAFVGALGG AAFLGTAHLH |
| 5415 | 693 | 2986 | IPPKTKLELQKH\LTTLT\NQEQTIFEEVQKLRPRNEQRENE IISFLRLCFEERKQKEHIIHIGEMKQTSQMAENIGSELPPSATRF RLDMLKNKAKRSLTESLESILSRGNKARGLQEHISVLDLSSLS STLSNTSKEPSVCEKEALPISESSFLLGSEDLSSDSESHLPE EPAPLSPOQAFRRRANTLSHFPIECQEPQPARGSPGVSQRKLM RYHSVSTETPHERKDFESKANHLGDSGGTPVKTRRHSWRQOIFL RVATPQKACDSSRYEDYSELGELPPRSPLEPVCEGDPFPPPE EKKRTSRELRELWQKAILQQILLRMEKENQKLQASENDLLNKR LKLDYEBEITPCLKEVTTVWEKMLSTPGRSKIKFDMKMHSAVGQ GVP\RHRHGEIWKFLAEQFHLKHQFPKQPKDVPYKELLLQLT SQQHAILIOLGRTFPTHPYFSAQLGAGQLSLYNILKAYSLLDQE VGCCQLSFVAGILLHMSSEEAFFKMLKFLMDFMDGLRKQYRPM IILQIQMYQLSRLLDYHRDLYNHLEBEHEIGPSLYAAPWFLTMF ASQFPLGFVARVDFMIFLQGTETVIFKVALSLLGSHKPLILQHEN LETIVDFIKSTLPNLGLVQMEKTIQVFMEDIAKQLQAYEVEYH VLQEEILDSSPLSDNQMDKLEKTNSLRKQNLDLLEQLQVANG RIQSLBATIEKLLSSSESKLQAMLTLELERSALLQTVEELRRRS AKPSDREPECTQPEPTGD |
| 5416 | 27 | 4074 | KSQLCFCFWGGKAGDILSGDQDKEQKDPYFVETPYGYQLDLDLFLK YVDDIQKGNITIKRLNIQKRRKPSVPCPEPRTTSGQQGIWTSTES LSSNSDDNKQCPNFIARSQVTSPTISKPPPLETSLPFLTITP ENRQLPPSPQLPKHNLHVTKTLMETRRRLERATMQMTPEGEF RRPRLASFGMGTTSSSLPSFVSGNHNPAKHQLQNGYQNGDYG SYAPAAPTTSSMCSSIRHSPSSGISTPTVTVNSPMHLQHIREQM AIALKRLKELEEQVRTIPVLQVKISVLQEEKRQLVSLKNQRAA SQINVCGRKRSYSAGNASQLEQLSRARRSGGELYIDYEEEME TVEQSTORIKEFROL\TADMOALEQKIQDSSCEASSELRENGEC RSVAVGAFENMNDIVVYHRGSRSCDAAVGTLVEMRNCVSVTE AMLGVMTEADKEIELQQQTIESLKEKIYRLEVQLRETTDREMT KLKQELQAAGSRKKVDKATMAQPLVFSKVVEAVVQTRDQMVGSH MDLVDTCVGTSVETNSVGISCPCKNKVVGPELEMNWVVKER VEMHRCAGRSVEMCDKSVSVEVSVCTETGNTESVNDLTLTKT NLNLKEVRSIGCGDCSVDVTVCSPKECASRGVNTFAVSQVEAAV MAVPRADQDTSTDLQVHQFTINTETATLIESCINTCLSTLDKQ TSTQTVETRTVAVGRGRVKDINSSTKTRSIGVGTLLSGHSGFDR PSAVTKESGVGQININDNYLVGLKMRTIACGPPQLTVGLTASR RSVGVGDDPVGESLENPQQAPLGMMTGLDHYIERIQKLLAEQQ TLLEENYSELAEAFCEPHSQMGSLSNQLISTLSSINSVMKSAST BELRNPDFQKTSLGKITGSYLGYTCKCGGLQSGSPSSQTSQPE |

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|------------|--|--|--|
| | | | QEVGTSEGKPISSLDAPFTQEGTLPVNLTDQIAAGLYACTNN ESTLKSIMKKKDGKDSNGAKKNLQFVGINGGYETTSSDDSSSD ESSSSSESDDECDVIEYPLEEEEEEEDETRGMAEGHHAHNIEGL KSARVEDEMQVQECEPEKVEIRERYELSEKMLSACNLLKNTIND PKALTSKDMRFCLNTLQHEWFRVSSQSAIPAMVGDIYAFAEAI SPDVLRYVINLADGNGNTALHYSVSHSNFEIVKLLLDADVNCND HQNKAGYTPIMLAALAAVEAEKDMRIVEELFGCGDVNAKASQAG QTALMLAVSHGRIDMVKGLLACGADVNIQDDEGSTALMCASEHG HVEIVKLLLAQPGCNGHLEDNDGSTALSIALEAGHKDIAVLLYA HVNFAKAQSPGTPRLGRKTSPPGTPHRSFDF |
| 5417 | 27 | 4074 | KSQLFPCFWGGKAGDILSGDQDKEQKDPYFVETPYGYQLDLDLFK YVDDIQKGNITIKRLNIQKRRKPSVPCPEPRTTSGQQGIWTSIES LSSNSDDNKQCPNFIARSQVSTPISKPPPPLETSLPFLTIP ENRQLPPSPQLPKHNLHVTKTLMETRRRLERATMQMTGPEF RRPRLASFGMGTTSSLPFVSGSGNHNPAKHQLONGYQNGDYG SYAPAAPTTSSMGSSIRHSPLSSGISTPTNVSPMHLQHIREQM AIALKRLKELEEQVRTIPVLQVKISVLQEEKRLVSLQKNQRAA SQINVCGVRKRSYSAGNASQLEQLSRARRSGGELYIDYEEEME TVEQSTQRIKEFRQL\TADMQALEQKIQDSSCEASSELRENGEC RSVAVGABENMNDIVVYHRGSRSCKDAAVGTLVEMRNCGVSVTE AMLGVMTEADKEIELQQQTIESLKEKIYRLEVQLRETHDREMT KLKQELQAAGSRKKVDKATMAQPLVFSKVVEAVVQTRDQMVGSH MDLVDTCVGTSVETNSVGISQCPECKNKVVGPELPMNWWIVKER VEMHDCRAGRSVEMCDKSVSVESVVCETCSNTEESVNDLTLLKT NLNLKEVRSIGCGDCSVDVTVCSPEKACASRGVNTBAVSQVEAAV MAVPRADQDTS TDLEQVHQFTNTETATLIESCTNCLSTLDKQ TSTQTVETRTVAVGEGRVKDINSSTKTRSIGVGTLLSGHSGFDR PSAVKTKESGVGQININDNYLVGLKMRITACPPQLTVGLTASR RSVGVGDDPVGESLENPQPQAPLGMGTGLDHYIERIQKLLAEQQ TLAENYSELAEAFGEPHSQMGSLNSQLISTLSSINSVMKSAST EELRNPDFOKTS LGKITGSYLYGTCKCGGLQSGSPLSSQTSQPE QEVGTSEGKPISSLDAPFTQEGTLPVNLTDQIAAGLYACTNN ESTLKSIMKKKDGKDSNGAKKNLQFVGINGGYETTSSDDSSSD ESSSSSESDDECDVIEYPLEEEEEEEDETRGMAEGHHAHNIEGL KSARVEDEMQVQECEPEKVEIRERYELSEKMLSACNLLKNTIND PKALTSKDMRFCLNTLQHEWFRVSSQSAIPAMVGDIYAFAEAI SPDVLRYVINLADGNGNTALHYSVSHSNFEIVKLLLDADVNCND HQNKAGYTPIMLAALAAVEAEKDMRIVEELFGCGDVNAKASQAG QTALMLAVSHGRIDMVKGLLACGADVNIQDDEGSTALMCASEHG HVEIVKLLLAQPGCNGHLEDNDGSTALSIALEAGHKDIAVLLYA HVNFAKAQSPGTPRLGRKTSPPGTPHRSFDF |
| 5418 | 24 | 1133 | SVPRAGGDMETGAAELYDQALLGILQHVGNVQDFLRVLFGLYLR KTDFYRLRLRHPSDRMGFPPGAAQALVQVFKTFDHMAQDDEKR RQLEEEKIRKKEEEAKTVSAAAAEKEPVPVPVQETIEDSTTEL DGHQVEVEKVPPGPVKEMAHGSQAEAPGAVAGAAEVPR\EPPI LPRIQEQQFQKNPDSYNGAVRENYTWSQDYTDLEVRVPVPKHVVK GKQVSVALLSSSIRVAMLEENGERVLM3KLTHTKINTESSLWSL EPGKCVLVNLSKVGEYWNNAILEGEEPIDIDKINKERSMATVDE EEQAVLDRLTFDYHQKLQGGKQSHLKVHEMLKKGWDAEGSPFR GORFDPAMFNISPGAVQF |
| 5419 | 1395 | 259 | GTHPLDPLVSRSTSVCQPLMTMACPGMSDTEESFPLGPRAAEEG SESEACEAFGRKSEEEGRSDTSFGFRSRKHKNVNWKHPRADA KDPASLPQC/LGP/DCVRPAQSPSSKYCSDDCGMKLAANRIYEIL PQRIQQWQQSPCIAEEHGKLLERIRREQQSARTLQEMERRFH ELEAIIILRAQQAVREDEESNEGSDDTDLQIFCVSCGHPINPR VALRHMERCYAKYESQTSFGSMYPTRIEGATRLFCDVYNPQSKT YCKRLQVLCPEHSRDPKVPADDEVCGCPLVRDVFEITGDFCRLPK RQCNRHVCWEKLRRAEVDLVRVWVKLDELFEQERNVRTAMTN RAGLLALMLHQTIQHDLPLTDLRSSADR |
| 5420 | 117 | 1733 | NEACCACPFKGGASGRILYLSPLRPVSVAGCEERPLGWWVVLGG GGFLPARPPRAQRHLGFSHAQSMAPDYEVLSVREQLFHERIR |

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|------------|--|--|--|
| | | | ECIISTLLFATLYILCHIFLTRFKKPAEFTT\GMMKMPPSTR/LLELCTFTLAIAGAVLLLPFSIISNEVLLSLPRNYYIQWLNGSLIHGLWNLVFLFSNLSLIFLMPFAYFFTESEGFAGSRKGVLRVYETVVMMLLTLLVLGMVWVASAIVDKNKANRESLYDFWEYLYLPLYSICISFLGVLVLLVCTPLGLARMFVSVTGKLLVKPRLLDLEEQLYCSAFEEAALTRRICNPTSCWLPDMLLHRQVLALQTRVLEKRRKASAWQRNLGYPLAMLCCLLVLTGSLVLIIVAIHILELLIDEAAMPGRMQGTSLGQVSFSKLGSGFAGVIQVVLIFYLMVSSVVGFYSSPLFRSLRPRWHDAMTQIIGNCVCLLVSSALPVFSRTLGLTRFDLLGDFGRFNWLGNYFIVFLYNAAFAGLTTLCLVKTFATAVRaelirafgere |
| 5421 | 117 | 1733 | NEAGGACPFKGGASGRLYLSPRLPRVSAGCEERPLGWWVVLGGGGFLPARPPFRAQRHLGFSHAQSMSEADPYEVLVSRQLPHERIRECIISTLLFATLYILCHIFLTRFKKPAEFTT\GMMKMPPSTR/LLELCTFTLAIAGAVLLLPFSIISNEVLLSLPRNYYIQWLNGSLIHGLWNLVFLFSNLSLIFLMPFAYFFTESEGFAGSRKGVLRVYETVVMMLLTLLVLGMVWVASAIVDKNKANRESLYDFWEYLYLPLYSICISFLGVLVLLVCTPLGLARMFVSVTGKLLVKPRLLDLEEQLYCSAFEEAALTRRICNPTSCWLPDMLLHRQVLALQTRVLEKRRKASAWQRNLGYPLAMLCCLLVLTGSLVLIIVAIHILELLIDEAAMPGRMQGTSLGQVSFSKLGSGFAGVIQVVLIFYLMVSSVVGFYSSPLFRSLRPRWHDAMTQIIGNCVCLLVSSALPVFSRTLGLTRFDLLGDFGRFNWLGNYFIVFLYNAAFAGLTTLCLVKTFATAVRaelirafgere |
| 5422 | 3 | 1263 | SCGESLPTWLAGASRPGIGRKGGAWGGRGSSPAQVLLSPGPVFKAGCNWHLSDQAGVQRCDLGSSQPPPLGFKRFSCLSLPSSWDYRSTVLCVSKMEADLSGFNIDAPRWDORTFLGRVKHFLNITDPRTVFVSERELDAKVMVEKSRMGVVPPTQVEQLLYAKKLYDSAFHPDTGKMNVIIGRMSFQLPGGMIITGFMQLQFYRTMPAVIFQWVQNSFNALVNYTNRNAASPTSVRQMAISYFTATTTAVATAVGMMNLTKKAPPLVGRWVPPFAVAANCVNIPMMRQQLKGCICVKDRNENEIGHSRRAAAIGITQVVISRITMSAPGMILLPVIMERLEKLHFQKVKVL/SAPLQVMLSGCFLIFMVPVACGLFPQKCELPVSYLSPKLQDTIKAKYGELEPYVVFYFNKGL |
| 5423 | 3186 | 905 | GVSMALGEEKAEAEASEDTKAQSYGRGSGCRERELDIPGPMSEGEPPRLEAEGGLISPVWGAEGIPAPTCWIGTDPGPPSRAHQPDASDANREPVAERSEPALSGLPATMGSGDLLSGESQVEKTKLSSSEFFPQTLSLPRTTICSGHDADTEDDDPSLADLPQALDLSQQPHSSGLSCLSQWKSVLSPGSAAPSSCSISASSTGSSSLQGHQERAEPRGGSLLAKVSSSLEPVVPQEPSSVVGGLGPRPQWSPQPVFSGGDASGLGRRRLSFAEYWACVLPDLSLPPSPDRHSPWNPNKEYEDLLDYTYPLRPGPQLPKHLDSRPVADPVLQDSGVDLDSFVSVPASTLTKSPTNVSPNCPPEAATALPFSGPREPSLKQWPSRVPQKQGGMGLASWSQLASTPRAPGSRDARWERREPALRGAKDRLITIGKHLDMGSPQLRTRDRGWPSRPREKRTSQSARRPTCTESRWKSEEEVESDDEYLALPARLTQVSSLSVYLGSI STLVTLP TGDIKGQSPLEVS DSDGPASFPSSSSSQQLPPGAALQSGDPEGQNPCLFSLFVRAHDSAGEGLSGSSQALGVSSGLLKT RPSLPARLDRWPFSDPDVEGQLPRKGGEQKESLVQC\VKTFC\COLEELICWLYNV\ADVTDHGTPARSNLTSLK\SSLQLYRQFKKDIDRHQSI.TFSVLQKGEILLQCLLENTPVLEDVLGRIAKQSGELESADRLYDSILASLDMLAGCTLIIPDKKPMAMEHPCEGV |
| 5424 | 3186 | 905 | GVSMALGEEKAEAEASEDTKAQSYGRGSGCRERELDIPGPMSEGEPPRLEAEGGLISPVWGAEGIPAPTCWIGTDPGPPSRAHQPDASDANREPVAERSEPALSGLPATMGSGDLLSGESQVEKTKLSSSEFFPQTLSLPRTTICSGHDADTEDDDPSLADLPQALDLSQQPHSSGLSCLSQWKSVLSPGSAAPSSCSISASSTGSSSLQGHQERAEPRGGSLLAKVSSSLEPVVPQEPSSVVGGLGPRPQWSPQPVFSGGDASGLGRRRLSFAEYWACVLPDLSLPPSPDRHSPWNPNKEYEDLLDYTYPLRPGPQLPKHLDSRPVADPVLQDSGVDLDSFVSVPASTLTKSPTNVSPNCPPEAATALPFSGPREPSLKQWPSRVPQKQGGMGLASW |

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|------------|--|--|---|
| | | | <p>SQLASTPRAPGSRDARWERREPALRGAKDRLTIGKHLDMGSPQL RTRDRGWPSRPRPEREKRTSQSARRPTCTESRWKSEEEVESDDEY LALPARLTQVSSSLVSYLGSISTLVTLPTGDIKQSPLEVSDDG PASFPSSSSQSQLPPGAALQGGSDPEGQNPCLRSFVRAHDSAG EGSLGSSQALGVSSGLLKTRPSLPARLDRWPFSDPDVEGQLPRK GGEQKESLVQC\VKTFC\CQLEELICWLYNV\ADVTDHGTTPAR SNLTSLK\SSLQLYRQPKKDIDEHQSLTESVLQKGRILLQCLLE NTPVLEDVLGRIAKQSGELESADRLYDSILASLDMLAGCTLIP DKKPMAMEHPCEGV</p> |
| 5425 | 1086 | 115 | <p>GFCSPSPSLGHQPPRVLHPTMSMAVETFGFFMATVGLMLGLVTL NSYWRVSTVHGNVITNTIFENLWFS CATDSLGVYNCWEFFSML ALSGYIQACRALMITAILLGLGLLLGLAGLRCTNIGGLELSRK AKLAATAGAPH\ILPGICGMVAI\SWYAFNITR\DESDPLYPGT KYELGPALYLWGSASLISILGGLCLCSACCGSDEDEPAASARRP YQAPVSVMPVATSDQEGDSSFGKYGRNALRVAALCRGPRCLPTA PKKRGPGRGPFVSNLRGRPRPVVAPPRPRRVLHSHGSPQAK NCSWEVAYLPSEAGSLIF</p> |
| 5426 | 42 | 3435 | <p>ATSSQSLGRADPPRGGTMERSEFGEPSFSPMDQPSAFSDPTDQP PAAHAKPDPGSGGQPPAGPGAAGEALAVLTSFGRRLVLIPVYLA GAVGLSVGFVFLGLALYLGWRRVRDEKERSLRAARQLLDDEEQ TAKTLYMSHRELPAWVSFPDVEKAEWLNKIVAQVWPFLLGYMEK LLAETVAPAVRGSNPHLQTFTRVELGEKPLRIIGVKVHPGQR KEQILLDLNISYVGDVQIDVEVKKYFCKAGVKGMQLHGVLRVIL EPLIGDLPPFVGAVSMFFIRRPDLINWGTMTNLLDIPGLSSLS TMIMDSIAAFLVLPNRLVLPVLDLQDVAQLRSLPLRGTIRIHL LAARGLSSKDKYVKGLIEGKSDPYALVRLGTQTFCSRVIDEELN POWGETYEVVMHEVPGEIEVEVFDKDPDKDDFLGRMKLDVGKV LQASVLDWFLPQGGQGVHLRLLEWLSLLSDAEKLEQVLQWNWG VSSRPDPSSAAILVVYLDRAQDLPMVTSELYPPQLKKGKNEPNP MVQLSIQDVTQESKAVYSTNCPVWEAFAFRFFLDQPPSQBELDVQ KDDSRALTGLTLPARLLTAPELILDQWFQSSSGPNSRLYM KLVMRILYLDSEICFPTVPGCPGAWDVDSNPQRGSSVDAPPR PCHTTPDSQFGTEHVLRIHVLEAQDLIAKDRFLGLVKGKSDPY VKLKLGRSFRSHVREDLNPRWNEVFVIVTSVPGQELEVVEF DKDLDDKDDFLGRCKVRLTTVLNSGFLDEWLTLEDVPSGRHLRL ERLTPRPTAAELEEVQLVNSLIQTQKSAELAAALLSIYMERAE LPLRKGTKHLSPYATLTVGDSSHKTKTISQTSAPVWDESASF RKPHTESLELQVRGEGTGVLSLSLPLSELLVADQLCLDRWFTL SSGQGVLLRAQLGILVSHSGVEAHSHSYSHSSSLSEEPELS GGPFPHTSSAPEV\RQRLTHVDSPLAPAGPLGQVKLTWYYS ERKLSIVHGCRSLRQNGRDPDPVVSLLLPDKNRGTRKRTSQ KKRTLSPEFNERFEWELPLDEAQRRLDVSVKNSSSFMSREREL LGKVQLDLAETDLSQGVARWYDLMNDKDKGSS</p> |
| 5427 | 42 | 3435 | <p>ATSSQSLGRADPPRGGTMERSEFGEPSFSPMDQPSAPSDPTDQP PAAHAKPDPGSGGQPPAGPGAAGEALAVLTSFGRRLVLIPVYLA GAVGLSVGFVFLGLALYLGWRRVRDEKERSLRAARQLLDDEEQ TAKTLYMSHRELPAWVSFPDVEKAEWLNKIVAQVWPFLLGYMEK LLAETVAPAVRGSNPHLQTFTRVELGEKPLRIIGVKVHPGQR KEQILLDLNISYVGDVQIDVEVKKYFCKAGVKGMQLHGVLRVIL EPLIGDLPPFVGAVSMFFIRRPDLINWGTMTNLLDIPGLSSLS TMIMDSIAAFLVLPNRLVLPVLDLQDVAQLRSLPLRGTIRIHL LAARGLSSKDKYVKGLIEGKSDPYALVRLGTQTFCSRVIDEELN POWGETYEVVMHEVPGEIEVEVFDKDPDKDDFLGRMKLDVGKV LQASVLDWFLPQGGQGVHLRLLEWLSLLSDAEKLEQVLQWNWG VSSRPDPSSAAILVVYLDRAQDLPMVTSELYPPQLKKGKNEPNP MVQLSIQDVTQESKAVYSTNCPVWEAFAFRFFLDQPPSQBELDVQ KDDSRALTGLTLPARLLTAPELILDQWFQSSSGPNSRLYM KLVMRILYLDSEICFPTVPGCPGAWDVDSNPQRGSSVDAPPR PCHTTPDSQFGTEHVLRIHVLEAQDLIAKDRFLGLVKGKSDPY VKLKLGRSFRSHVREDLNPRWNEVFVIVTSVPGQELEVVEF DKDLDDKDDFLGRCKVRLTTVLNSGFLDEWLTLEDVPSGRHLRL</p> |

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|------------|--|--|--|
| | | | ERLTTPRTAAEELEVLQVNSLIQTQKSAELAAALLSIYMERAE LPLRKGTKHLSPYATLTVGDSHKTITISQTSAPVWDESASFLI RKPHTESLELQVRGEGTGLVLSLPLSELLVADQLCLDRWFTL SSGQGVLLRAQLGILVSHSGVEAHSHSYSHSSSSLSSEPELS GGPPHITSSAPEV\RQRLTHVDSPLEAFAGPLGQVKTTLWYYS ERKLVSIHVGCRSLRQNGRDPDPYVSLLLLPDKNRGTRKRTSQ KKRTLSPEFNERFEWELPLDEAQRRLDVSVKSSNSFMSRREL LGKVQLDLAETDLSQGVARWYDLMNDKDGSS |
| 5428 | 3 | 1839 | SSRSERLSACAIAPPWLVSRRPARPAQLQRPCKMVEDGAELED LVHFSVSELPSPRGYGVMEIIRQKGLCDVTLKIGDHKFSASHRIV LAASIPYFHAMFTNDMECKQDEIVMQGMDPSALEALINFAYNG NLAIQQNVQSLMGLASFLQLQSIKDACCFTLRERLHPKNCGLV RQFAETMCAVLYDAANSFIHQHFVEVSMSEFTLPLEDVLEL VSRDELNVKSEEQVFEALAWRYDREQRGTFL\RLNQSNI FCRPQFLSDRVQDDLVRCCHKCRDLVDEAKDYLLMPERRPHLP AFRTRPRCCTSIAGLIYAVGGLNSAGDSLNVVEVDFPIANCWER CRPMTTARSRVGVAVVNGLLYAIGGYDGLRLSTVQAYNTETDT WTRVGSMSKRSAMGTVVLDGQIYVCGGYDGNSSLSVETYSPE TDKWTVTSMSSNRSAA\GVTVFEGRIYVSGGHDGLQIFSSVEH YNHHTATWHPAAGMLNKRCHGAASLGSKMFVCGGYDGSGLSI AEMYSSV\ADQWCLIVPM\HTRR\SRVSLGGPAVGRLYAVWGV TGQSNL\SSVGDVLTPEPTDCWTFM\APMACHEGGVGVGCIPLLT I |
| 5429 | 828 | 202 | RREDALSSSEGCLWPSESTVSGNGIPEPQVYAPPRPTDR LAVPPF AQRRERFHRFQPTYPYLQHEIDLPTTISLSDGEEPPPYQGPTCLQ LRDPEQLELNRESVRAPPNRTIFDSDLMDSARLGGPCCPSSNS GISATCYGSGGRMEGPPP\TYSEVIGHYPGSSPQHQQSSGPPSL LEGTRLHHHTIAPLESAAIWSKEKDKQKGHPL |
| 5430 | 441 | 1507 | QKRRKRRRKKIMKTIQPKMHNSTISWAIFTGLAALCLFQGVVRS GDATFPKAMDNVTVRQGSATLRCTIDNRVTRVAVLNRSSTILYA GNDKWCLEDPRVLLSNTQTQYSIEIQNVVDYDEGPYTCVQTDN HPKTSRVHLIVQVSPKIVEISSDISINEGNNISLTCIATGRPEP TVTWRHISPKAVGFVSEDEYLEIQGITREQSGDYECASNDV\A APV\VRVVKVTNYPPISEAKGTGVVPGQKGTQCEASAVPSA EFQWYKDDKRLI/EGKKGVKVENRPFSLKLIFFNVSEHDYGNYT CVASNKLGHNTASIMLEFGPAVSEVSNGTSSRRAGCVWLLPLLV HLLKLF |
| 5431 | 2 | 1312 | AAAAPGSRRRRPLPDRPHMAHGYEAPPPAPRSPAWRARSKPV\ LPGITINP\TIAEGPSP\TSEGASEANLVDLQKKLELELDEQQ KKRLEAFLTQKAKVGELKDDDFERISELGAGNGGVVTKVQHRPS GLIMARKLIHLEIKPAIRNQIIRELQVLHECNSPYIVGFYGAFY SDGEISICMEHMDGGSLLDQVLKEAKRIPEILGKVSIAVLRGLA YLREKHQIMHRDVKPSNIVNSRGEIKLDFGVSGQLIDSMANS FVGTRSYMAPERLQGTHTYSVQSDIWSMGLSLVELAVGRYPPIPP DAKELEAIFGRPVVDGEGEPHSISPRPRPPGRPVSGHGMDSRP AMAIPELLDYIVNEPPPKLPNGVFTPDFQEFVNKCLIKNPAERA DLKMLTNHTFIKRSEVEEVDFAWLCKTLRLNQPGTPTRTAV |
| 5432 | 2 | 1312 | AAAAPGSRRRRPLPDRPHMAHGYEAPPPAPRSPAWRARSKPV\ LPGITINP\TIAEGPSP\TSEGASEANLVDLQKKLELELDEQQ KKRLEAFLTQKAKVGELKDDDFERISELGAGNGGVVTKVQHRPS GLIMARKLIHLEIKPAIRNQIIRELQVLHECNSPYIVGFYGAFY SDGEISICMEHMDGGSLLDQVLKEAKRIPEILGKVSIAVLRGLA YLREKHQIMHRDVKPSNIVNSRGEIKLDFGVSGQLIDSMANS FVGTRSYMAPERLQGTHTYSVQSDIWSMGLSLVELAVGRYPPIPP DAKELEAIFGRPVVDGEGEPHSISPRPRPPGRPVSGHGMDSRP AMAIPELLDYIVNEPPPKLPNGVFTPDFQEFVNKCLIKNPAERA DLKMLTNHTFIKRSEVEEVDFAWLCKTLRLNQPGTPTRTAV |
| 5433 | 360 | 1885 | SVQEDKVGFEPLHLCSWRARACPTWPC/CTGLLECLGFAGV LFGWPSLVFVFKNEDYFKDLCPDAGPICNATGQADCKAQDERF SLIFTLGSEFMNFMFTFPTGYIFDRFKTTVARLLAIFYTTATLI |

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|------------|--|--|---|
| | | | IAFTSAGSAVLLFLAMPMLTIGGILFLITNLQIGNLFGQHRSTI TTLYNCAFDSSSAVFLI IKLLYEKGISLR/VLLHLHLCLQYLAC STHFPDAPGAHP IPTAPQLQLWPVPWEWHHKGREG/QQLSMKT GSYSQRSS FQRRKR PQGGRSRNSAPSGATL/CSRRFAWHLVWL SVIQLWHYLF IGITLNSLLTNMAGGDMARVSTYTNAFAFTQFGVL CAPWNGLLMDRLKQKYQKEARKTGSSTLAVALCSTVPSLALTSI LCLGFALCASVPIPLQYLTFFILQVISRSFLYGSNAFLTLAFA SEHFGKLFGLVMALSAVVSLLQFPFIFTLIKGS LQNDPFYVNVMF MLAILLTFHFPFLVYRECRTWKESPSAIA |
| 5434 | 66 | 652 | RYAALITISLIQHKLWRNQHCSRVCVIMSPAQSAGLNWLF/GSGK HGPF LGCSQYPACD YVRPLKSSADGHI VKVLEGGVCPACGANLV LRQGRFGMFIGCTINYPECEHTELDKPDETAITCPQCRTGHLVQ RRSRYGKTFHSCDRYPECQFAINFKPIAGECEPECHVPLLIEKKT AQGVKHFCAASKQCGKPVSAE |
| 5435 | 4704 | 1597 | PGDSSQRLAEMSNAKERKHA KMRNQPTNVTLSGGFVADRGVKH HSGGEKPFQAQKQEPHPGTSRQRCRTRVNPHSLPDPEVNEQSSSK GMFRKKGWGWKAGPEGTSQEIPKYITASTFAQARAAEISAMLKAV TQKSSNSLVFQTLERHMRRRAMSHNVKRLPRRLQEBIAQKEAEKA VHQKKEHSKNKCHKARRCHMNRTLEFNRRQKKNIWLETHIWHAK RPHMVKKWGYCLGERPTVKSHRACYRAMTNRLCLQDLSSYYCCLE LKGKEEILKALSGMCNIDTGLTFAAVHCLSGKRQGS LVLVYRVN KYPREMLGPVTFINQSORTPGDPSSESRLWIWHLPTLKQDILEE IKAACQCVEPIKSAVCIADPLPTPSQEKSTELPDEKIGKRRKR KDDGENAKPIKKIIGDGTDRDCLPYSWISPTTGIIISDLTMEMN RFRLLIGPLSHSILTEAIKAASVHTVGEDTEETPHRWIETCKKP DSVSLHCRQEAIFELLGGITSPAETPAGTILGLTVGDPRINLPQ KKS KALPNPEKCDNEKVRQLLEGVPECTHSFIWNQDICKSV TENKISDQDINMRSELVPGSQLILGPHESKIPIILLIQPGKV TGEDRLGWGSGWDVLLPKGWGMFWIPFIYRCVRVGGKESAVH SQYKRSPNVPGDFPDCPAGMLFAEEQAKNLEKYKRRPPAKRPN YVKGTLAPFCCPWEQLTODWESRVQAYEESPVSASSPNGKESDL RRSEVPACMPKKT HQPSDEVGTSIEHPREAEVMDAGCQESAG PERITDQEAENHVAATGSHLCVLRSRKLLKQLSANCPSSES RGGRRAPGRGQQLTREACLSILGHFPRLVWVSLSLSKGSPE PHTMICVPKEDFLQLHEDWHYCGPQESKHSPPFRSKILKQKEK KKREKRQKP\GRASSDGPAGEEPVAGQEA LTLGLWSGPLFRVTL HCSRTLLGFVTQGD FSNMVGCGEALGFVSLTGLLDMLSSQPAQ RGLVLLRPPASLQYRFARIAIEV |
| 5436 | 1781 | 635 | ASDSIPWSEARTTRKLAQRGCQWSLPERMPLVVFGLPYSGKSR RAEELRVALAAEGRVYVDDAAVLGAEDPAVYGDSAREKALRG ALRASVRRRLSRHDVILDSLNIKGFYELY\CLARAARTPLC LVYCVRPGGPIAGPQVAGANENPGRNVSVSWRPRAEEDGRAQAA GSSVLRELHTADSVVNGSAQADVPELEREESGAESPALVTPD SEKSAKHGSGAFYSPELLEALT LRFAPDSRNWRDRPLFTLVGL EEPLPLAGIRSALFENRAPP HQSTQSOPLASGSFLHQLDQVTS QVLAGLMEAQSAVPGDLLTLPGTTEHLRFRPLTMAELSRRLR QFISYTKMHPNNENLPQLANMFLQVLSQSLH |
| 5437 | 739 | 1672 | CQEAASEFGGPLHTPAMFLRLCGWLPRPWGRRKPMRDPFPYPE PRRVDSSSENSGSDWSAPETMEDVGHKPKTDSGALRVSGRAASE PSKEEPQVEQLGSKRMDSLKWDQPISS TQESGRLEAGGASPKLR WDHVDSGGTRRPGVSP EGG\GVPGPGAPLEKPGRRKLLGWLR GEPCAPSRYLGGPEECLQISTNLTLHLLELLASALLALCSRPLR AALDTLGLRGPLGLWLHGLLSFLAALHGLHAVLSLLTAHLPHFA CLFGLLQALVLAVSLREPNGDEAATDWESEGLEREGBEQRGDPG KGL |
| 5438 | 2443 | 1152 | TKPRKRRHQPASQRQRPWSSDSTGDL LARGKGRKEENKGS DRVS LAPPSLRPMCMQSEARQGP ELRAAKWLHFPQLALRRRLGQLSC MSRPALKLRSWPLTVLYYLLPFGALRPLSRVGRVPVSRVALYKS VPTRLLSRAWGRINQVLPWLRRPVYSLYIWTFGVNMKEAAVE DLHHYRNLSEFFRRKLKQARPVCGLHSVISPSDGRILNFGQVK NCEVEQVKGVTSYLSLFLGPRMCTEDLPFPFAASCD SFKNQLVT |

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|------------|--|--|---|
| | | | REGNELYHCVIYLAPGDYHCFHSPTDWTVSHRRHFPGLMSVNP GMARWIKELFCHNERVVLTDGDKHGFFSLTAVGAT\NWGSIRIY FDRDLHTNSPRHSGSYNDFSFTHTNREGVPMALRGEHLG/QS FNLGSTIVLIFEAPKDFNFQLKTGQKIRFGEALGSL |
| 5439 | 2443 | 1152 | TKPKRRRHQPASQRQRPWSSDSTGDLARGKGRKENKSGSDRVS LAPPSLRREMMCQSEARQGPPELRAAKWLHFPQLALRRRLGQLSC MSRPALKLRSWPLTVLYLLPFGALRPLSRVGRFPVSRVALYKS VPTRLLSRAWGRNLNQVELPHWLRRPVYSLYIWTFGVNMKEAAVE DLHHYRNLSEFFRRKLPQARPVCGLSHSVIFSDGRILNFGQVK NCEVEQVKGVTYSLESFLGPRMCTEDLPFPAPASCDSEKQNLVT REGNELYHCVIYLAPGDYHCFHSPTDWTVSHRRHFPGLMSVNP GMARWIKELFCHNERVVLTDGDKHGFFSLTAVGAT\NWGSIRIY FDRDLHTNSPRHSGSYNDFSFTHTNREGVPMALRGEHLG/QS FNLGSTIVLIFEAPKDFNFQLKTGQKIRFGEALGSL |
| 5440 | 693 | 253 | EPIPVTPDHLRLVTMTHTV\QTFSFVNS\GQPPNYEMLKEEQEVA MLGAPHNPAPPMTSTVIHIRSTSVDPHVWVSLFNTLFMNTCCLG FIAFAYSVKSRDRKMGVDVTGAQAYASTAKCLNIWALILGIFMT ILLIIIPVLVVAQR |
| 5441 | 2 | 2054 | CRDGGKNGFMVSPMKPLEIKTQCSGPRMDPKICPADPAFFSFIN NSDLWVANIEETGERRLTFCHQGLSNVLDDEPKSAGVATFVIEE FDRFTGYWWCPTASWEGSEGLKTLRIIYEEVDESEVEIVHPSP ALBERKTDSYRYPTGSKNPKIALKLAEFQTDGKIVSTQKE LVQPFSSSLFPKVEYIARAGWTRDGKYAWAMFLDRPQQNLQVL PPALFIPSTENEEQ\RLASARAVPRNVQPVVVEEVTNVWINVH DIFYPFPQSEGEDELCEFLRANFCKTGFCCHLYKVTAVLKSQGYD SEFPSPGEGEQSLTNAIWNNEETKLIVYFQGTQDTPLEHLLYVVS YEAAGEIVRLTTPGFHSHSCSMSONFDMFVSHYSSVSTPPCVH KLSGPDDDLPHKQPRFWASMMENAKIHPHTRSDVRLYGMIIYK HALQPGKKHPTVLVYVGGPQVQLVNNFSKGIKYLRLNTLASLGY AVVVIDGRGSCQGRGLRFEGLAKNQMGEIEDQVEGLQFVAEKY GFIDLSRVAIHGWSYGGFLSLMGLIHKPQVFKVAIAGAPVTVM AYDTGYTERYMDVPENNHQGYEAGSVALHVEKLPNEPNRLILH GFLDENVHFFHTNFLVSLIRAGKPYQLQVALPPVSPQIYPNER HSIRCPESGEHYEVTLLHFLQEYL |
| 5442 | 1 | 3474 | CGQSRRRSPDMPEAKPAKAPKGDAPKAPKEAPPKEAPAE APKEAPPEDQSPSTAEPTGVFLKKPDSVSVEGKDAVVAVKVG KELPKPTIKWFKGKWLGLGSKSGARFSPKESHNSASNVYTVL HIGKVVLDGRGYRLEVKAQDTCDSGCFNIDVEAPRQDASGQSL ESFKRTSEKSDTAGELDFGLLKKREVVEEKKKKKDDDDLG IPPEIWELLKGAKKSEYEKIAFYQGITDLRGLMLKRLKAKVEVK KSAFTKKLDPAYQVDRGNKIKLMVEISDPDLTKWPKNGQEK PSSKYVFENVGKKRILTINKCTLADDAAYEVAVKDEKCFTELFV KEPPVLIVTPLEDQQVFGDRVEMAVEVSEBGAQVMWMDGV TREDSPKARYRFFKDKGRHILIFSDVVQEDRGRYQVITNGGQCE AELIVEEKQLEVLQDIADLTVKASEQAVFKCEVSEKVTGKWKY NGVEVRPSKRITISHVGRFHKLVDDVRPEDEGDYTFVPDGYAL GSLSAKLNFLIEIKVEYVPKQ\BPPKIPLGFASGGKTSNAD/IV VVAGNKLRLDV\SITGEAPSPFAT\WLKG\DEVFTTTEGRTRIE KRVDCSSFVIESAQREDEGRYTIKVTNPIGEDVASIFLQVVDVP DPPEAVRITSVGEDWAILVWEPPMYDGGKPVTYGLVERKKKGSQ RWMKLNFEVFTETTYESTKMEIGILYEMRVFAVNAIGVSQPSMN TKPFMPIAPTSEPLHLIVEDVDTTTLKWRPPNRIGAGGIDGY LVEYCLEGSEEWVANTEPVERCGFTVKNLPTGARI LFRVGVN IAGRSEPATLAQVPTIREIAEPPKIRLPHRLRQTYIRKVGEQLN LVVPFGQKPRPQVVTWTKGAPLDTSRVHVRTSDFDTVFFVRQAA RSDSGEYELSVQIENMKDTATIRVVEKAGPPINVMVEVWGT NALVEWQAPKDDGNSEIMGYFVQKADKKTMEWFNVYERNRHTSC TVSDLIVGNBYFRVYTENICGLSDSPGVSKNTARILKTGITFK PFEYKEHDFRMAPKFLTPLIDRVVAVAGYSAALNCAVRGHPKPKV VWMKNKMEIREDPKFLITNYQGVLTNLNRRPSFFDAGTYTCRAV NELGEALAECKLEVRVPQ |

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|------------|--|--|--|
| 5443 | 66 | 1003 | SRGQLDAGQSSEQHGGNRQPEQSRSSSSSSSSSPRRSRSAEPA MALSMPLNGLKEEDKEPLIELFVKAGSDGESIGNCPFSQRLFMI LWLKGVVFSVTTVDLKRKPADLQNLAPGTHPPFITPNSVKTVDV NKIEEFLEVLCPKYLKLSPKHPESNTAGMDIFAKFSAYIKNS RPEANEALERGLLTKLQKLDEYLNPLDEIDENSMDIKFSTR KFLDGNEMTLADCNLLPKLHIVKVVARKYRNFDPKEMTGIWRY LTNAYSREFTNTCPSDKEVEI\AYSDEVAKRLHQVKSRLLEKVS FMSSP |
| 5444 | 2 | 344 | SGPIGVGTGAQMAKWLRLDYLSEGGRRPPPPPTPDYTESDILRAY RAQKNLDFEDPY*DESERLEPDPAGPGDSKNPGDAKYGSPKHLR IKVEAADMARAKALLGGPGELEADTEYLDPFDAQPHAPDDG YMEPYDAQWVMSLEPGRGVQLYDTPYEEQDPETADGPPSGQKPR QSRMPQEDERPADEYDQPEWKKDHISRAFAVQFDSPEWERTPG SAKELRRPPPPSPQPAERVDPALPLEKQPWFGPLNRADAESIL SLCKEGSYLVRLESTNPQDCSLSLRSSQGFLLKLFARTRENQVV LGQHSPPFPSPVPELVLYSSRPLPVQGAELALLYEVVVTQTP*Q *PDWGDRRPNGQVATGLPELWGAEAPSAAHPLHRHRHPEGLP RAEKPGLRGLLGLREPLGAGPRGPWGLQEPRRCCQVWFSQAPAH QGGCGYQSQSGPSGRPRGGAGSRH |
| 5445 | 2364 | 486 | ILSRGFLGSVEICQLPLPASEPVLTLTWARRRWRETRSRREPT TLRAQSVCPWWI*ETRMNRSIPVEVDESEFYPSQLLPIPEYSP EESEPPAPNIRNMAPNSLSAPTMLHNSGDFSAHSTLKLANH QRPVSRQVTCRLTQVLEDSSEDFCRRHPGLGKAFPSGCCSAVSEP ASESVVGGALPAEHQFSFMEKRNQWLVSQLSAASPDTHGDSKSD QSLPNASADSLSGGSQEMVQRPQPHNRACLDLPTIDTGYSQPFQ DVLGIRQLERPLPLTSVCYPQDLPLRLSRREFPQEPQRYPACA QMLPPNLSPHAPWNYHYHCPGSPDHQVPYGHDPYRAAYQQVQIP ALPGQPLPGASVRGLHPVQKVLNYPSPWDQERPAQRDCSFPFQ LPRHQDQPHHQPNRAGAPGESLECPAELRQVVPQPPSPAAPVR PPSNPPARGTLKTSNLPPELRKVFTIYSMDTAMEVVKFVNFLLV NGFQTADIDFEDRIRGIDI IKWMERYLRDKTVMIIVAISPKYKQ DVEGAESQLDEDEHGLHTKYIHRMMQIEFIKQGSMMNFRFIPVLF PNAKKEHVPTWLQNTHVYSWPKNKNILLRLREEEYVAPPRGP LPTLQVVPL |
| 5446 | 972 | 161 | SSWSWCTGRMRKTRLWGLLWMLFVSELRAATKLTEBKYELKEGQ TLDVKCDYTLEKFASSQKAWQIIRDGEMPKTLACTERPSKNPSH VQVGRILLEDYHDLGLLRVMVNLQVEDSGLYQCVIYQPPKEPH MLFDRIRLVVTKGFSGTPGSNENSTQNVYKIPPTTTKALCPLYT TPRTVTQAPPKSTADVSTPDSEINLTNVTDIIRVPVFNIVILLA GGFLSKSLVFSVLFVAVTLRSFVP*AHEPTRMSSDFQPHPSGSCA KGGRR |
| 5447 | 207 | 617 | MTARTLSLMAISLVAYDDSDSEAEETHAGSFNATGQOKDTSQVAR PPGQDFASGTLDPVKAGAQPTKHGSCEDPGGYRLPLAQLGRSDR GSCPSQRLQWPGKEPQVTFPIKEPSCSSLWTHSVHPASHMPLAAA RFKQVKLSRNFPKSSFHAQSESETVGKNGSSFQKKKCEDCVVPY TPRRLRQRQALSTETGKGKDVPEQGPAPRAPAPLYVGPVSEF IQPYLNSHYKETTVPRKVLFHLRGHRGPVNTIQWCPVLSKSHML LSTSMDKTFKVVNAVDSGHCLQTYSLHTEAVRAARWAPCGRRIL SGGDFALHLDLETGTQLFSGRSDFRITTLKFHPKDHNIPLCG GFSSEMKAWDIRTGKVMRSYKATIQOTLDILFLREGSEFLSSTD ASTRDSADRTI IAWDFRTSAKISNQIFHERFTCPSLALHPREP FLAQTNNGNYLALFSTVWPYRMSRRRRYEGHKVEGYSVGCCECPG GDLLVTGSADGRVLMYSFRTASRACTLQGHQAACVGTTHYHPLP SVLATCSWGGDMKIWH*AFHWLSLGEAIGDLAPARGYSGPGRSL KSPSPSKSLVLLCGRAMFQAPATCPWQLPALSK |
| 5448 | 194 | 1833 | MASKVTDIVWYQKKIGAYDQIWEKSVEQREIKGLRNKPKKTA HVKPDLIDVDLVRGSAFAKAKPESWTSLTTKGIVRVVFFPFFF RWWLQVTSKVIFFWLLVLYLLQVAAIVLFCSTSSPHSIPLTEVI GPIWMLLLGTVHCQIVSTRTPKPLSTGGKRRRLKRAHLEV HREGDGSSTTDNTQEGAVQNHGTSTSHSVGTVFRDLWHAFFLS GSKKAKNSIDKSTETDNGYVSLDGKKTVMKSGEDGIQNHPEQCET |

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|------------|--|--|--|
| | | | IRPEETAWNTGTLRNGPSKDTQRTITNVSDEVSSSEGPETGYSLRRHVDRTSEGVLRNRKSHHYKKHYPNEDAPKSGTSCSSRCSSSRQDSESARPESETEDVLWEDLLHCAECHSSCTSETDVENHQINPCVKKEYRDDPFHQSHLPWLHSSHPGLEKISAIWEGNDCKKADMSVLEISGMIMNRVNSHIPGIGYQIFGNAVSLILGLTPFVFRLSQATDLEQLTAHSASELYVIAFGSNEDVIVLSMVIISFVVRVSLVWIFFFLLCVAERTYKQVGIM*TSEGVLRNRKSHHYKKHYPNEDAPKSGTSCSSRCSSSRQDSESARPESETEDVLWEDLLHCAECHSSCTSETDVENHQINPCVKKEYRDDPFHQSHLPWLHSSHPGLEKISAIWEGNDCKKADMSVLEISGMIMNRVNSHIPGIGYQIFGNAVSLILGLTPFVFRLSQATDLEQLTAHSASELYVIAFGSNEDVIVLSMVIISFVVRVSLVWIFFFLLCVAERTYKQVGIM |
| 5449 | 194 | 1833 | MASKVTDIAIVVYQKKIGAYDQKIWEKSVEQREIKGLRNRKPKKTAHVKPDLLIDVDLVRGSFAKAKPESPWTSLTTKGIVRVVFFPFFFRWWLQVTSKVIFFWLLVLYLLQVAAIVLFCSTSSPHSIPLTEVIGPIWMLLLGTVHCQIVSTRTPKPLSTGGKRRRLKRAAHLEVHIREGDGSSSTTDNTQEGAVQNHGTSTSHSVGTVFRDLWHAFFLSGSKKAKNSIDKSTETDNGYVSLDGKKTVKSGEDGIQNHPEQCETIRPEETAWNTGTLRNGPSKDTQRTITNVSDEVSSSEGPETGYSLRRHVDRTSEGVLRNRKSHHYKKHYPNEDAPKSGTSCSSRCSSSRQDSESARPESETEDVLWEDLLHCAECHSSCTSETDVENHQINPCVKKEYRDDPFHQSHLPWLHSSHPGLEKISAIWEGNDCKKADMSVLEISGMIMNRVNSHIPGIGYQIFGNAVSLILGLTPFVFRLSQATDLEQLTAHSASELYVIAFGSNEDVIVLSMVIISFVVRVSLVWIFFFLLCVAERTYKQVGIM*TSEGVLRNRKSHHYKKHYPNEDAPKSGTSCSSRCSSSRQDSESARPESETEDVLWEDLLHCAECHSSCTSETDVENHQINPCVKKEYRDDPFHQSHLPWLHSSHPGLEKISAIWEGNDCKKADMSVLEISGMIMNRVNSHIPGIGYQIFGNAVSLILGLTPFVFRLSQATDLEQLTAHSASELYVIAFGSNEDVIVLSMVIISFVVRVSLVWIFFFLLCVAERTYKQVGIM |
| 5450 | 8136 | 1242 | GQQFASFPFC*NHPEVTVMALTDIDLQLOFSMSQPEALLLLAAGPADHLLQLYSGHLQVRLVLGQEEELRLQTPAETLLSDSIPTTVLTVVEGWATLSVDGFLNASSAVPGAPLEVPYGLFVGGTGTLGLPLYRGTSRPLRGCLHAATLNGRSLRLPLTPDVHEGCAEEFASDDVALGFSGPHSLAAPPAGTQDEGTLEFTLTQSRQAPLAFQAGGRGDFIYVDIFEGHLRAVVEKGQGTVLHNSVPVADGQPEHVSVINAHRLAISVDQYPTHTSNRGVLSYLEPRGSLLLGGDLAEASRHLQEHRLGLTPAETNASLLGCMEDLSVNGQRRGLREALLTRNMAAGCRLEEEYEDDAYGHYEAFTLAEFAWPAPELPEPCVPEPGLPPVFANFTQLLTISPLVVAEGGTANLEWRHVQPTLDMBAELRKSQLVFSVTRGAHYGELELDILGAQARKMFTLLDVNRKARFIHDSGSDTSQDLVLEVSVTARVPMPSCLRRGQTYLLPIQVNPVNDPPHIIFFPHGSLMVILEHTOKPLGPEVFCAYDPSACEGLTFCVLGTSSGLPVERRDQFGEPAEFSCRELEAGSLVYVHCGGPAQDLTFRVSDGLQASPPATLKVVVAIRPAIQIHRSTGLRLAQGSAMPILPANLSVETNAVGGQDVSVLFRVTGALQFGELQKHSTGGVEGAENWATQAFHQRDVEQGRVRYLSTDPQHAYDTVENLALEVQVQGEILSNLSFPVVTIQRATVWMLRLEPLHTQNTQETLTITAHLEATLEEAGSPSPPTHYEVVQAERKGNLQLGQTRLSDGQGTODDIQAGRVTYGATARASEAVEDTFRFRVTAPPYFSPLYTFPIHIGGDPDAPVLTNVLLVVPBGEGVLSADHLFVKSLSNASYLYEVMERFRLGLRAWRGTDQKTTMVTSPFTNEDLLRGLRVYQHDDSETTEDDIPFVATRQGESGDMAWEEVRGVFRVAIQPVNDHAPVQTIISRI FHVARGGRLLTTDDVAFSDADSGFADAQLVLTRKDLLFGSIVAVDEPTRPIYRFQEDLRKRRVLFVHSGADRGWILQVSDGQHQATALLEVQASEPYLRVANGSSSLVVPQGGGTIDTAVLHLDITNLDIRSGDEVHYHVTAGPRWGQLVRAGQPATAFSSQDLDGAVLYSHNGSLSPEDTMAFSVEAGPVHTDATLQVTIALEGPLAPLKLVRHKKIYVFQGEAAEIRRDQLEAAQEA VPPADIVFSVKSPPSAGYLVMSRGALADEPPSLDPVQSFSQEA VDTGRVLYLHSRPEAWSDAFSLDVASGLGAPLEGVLVELEVLPAAITPLEAQNFVSVPBGSSLTAPPLLRVSGPYFPFT |

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|------------|--|--|--|
| | | | LLGLSLQVLEPPQHGPLQKEDGPQARTLSAFSWRMVEQLIRYV HDGSETLIDSFVLMANASEMDRQSHFVFTVTVLPVNDQPPILT TNTGLQMWREGATAPIPAEALRSTDGSDGSEDLVYTIEQPSNGRV VLRGAPGTEVRSFTQAQLDGGVLVLFSHRGTLDDGGFPFRLSDGEH TSPGHFFRVTAQKQVLLSLKGSQTTLTVCPGSPVQPLSSQTLTRASS SAGTDPQQLLLYRVVRGPQLGRLFHAQQDSTGEALVNFTQAEVYA GNILYEHEMPPEPFWEAHDTELEQLSSPPARDVAATLAVAVSFE AACPQRPShLWKNKGLWVPEGQRARITVAALDASNLLASVPSPQ RSEHDVLEFQVTFPSRQQLLVSEEPHAGQPHFLQSLQAAGQLV YAHGGGGTQDDGFHFAHLQGPAGASVAGPQTSEAFAITVRDVN ERPPQPQASVPLRLTRGSRAPISTRAQLSVVDPDSAPGEIEYEVQ RAPHNGFLSLVGGGLGPVTRFTQADVDSGRFAFVANGSSVAGIF QLSMSDGASPLPMSLAVDILPSAIEVQLRAPLEVQALGRSSL SQQLRVVSDREEPEAAAYRLIQGPQYGHLLVGGRRPTSAFSQFI DQGEVVFVFTNFSSSHDHFRVLALARGVNASAVVNVTVRALLHV WAGGPWPGATLRLDFTVLDAEGLANRTGSVPRFRLLEGPRHGR VVRVPRARTEPGGSQLEVFQFTQDDLEDGRLGLEVRGPEGRAPGP AGDSLTLLELWAGQGVPPAVASLDFATEPYNARPYSVALLSVPEA ARTEAGKPESSTPTGEGPMASPEPAVAKGGFLSFLEANMFSV IIPMCLVLLLLALILPLLFYLRKRKNTGKHVDVQLTAKPRNGLA GDTETFRKVEPGQAIPLTAVPGQGGPPGGQPDPELLQFCRTPNP ALKNGQYVW |
| 5451 | 1 | 2274 | RDSSEQGRGTGDTLGRPSACMDALKPCLWRNHERGKKDRDSCGR KNSBPSPHSLALDAAPSQGLNFTLLFTKMLFIENFLFSPLP TPALICILTFGAALFLWLITRPQFVLPLLDLNNQSVGIEGGARK GVSQKNDLTSCCFSDAKTMYEVFQRLAVSDNGPCLGYRPNQ PYRWLSYKOVSDRAEYLGSCLLHKGYKSSPDQFVGIFAQNRPRW IISELACYTYSMVAVPLYDTLGPFAIVHIVNKADIAMVICDTPQ KALVLIGNVEKGFTPSLKVILMDPFDDDLQORGEKSGIEILSL YDAENLGKEHFRKPVPPSPEDLSVICFTSGTGDPKGAMITHQN IVSNAAFLKCVBHAYPEPTDDVAISYLPPLAHMFERIVQAVVYS CGARVGFQGDIRLLADDMKTLKPTLFPVPRLLNRIYDKVONE AKTPLKKFLKLAVSSKFKELQKGIIRHDSFWDKLIFAKIQDSL GGRVVRIVTGAAPMSTSVMTFFRAAMGCQVYEAYGOTECTGGCT FTLPGDWTSGHVGVPACNYVKLEDVADMNFTVNNEGEVCIKG TNVFKGLYKDPKTEALDSGWLHTGDI GRWLPNGTLKI IDRK KNIFKLAQGEYIAPEKIENIYNRSQPVQLIFVHGESLRSSLVGV VVPDTDVLPFAAKLGVKGSFEELQONQVREAILEDLQKIGKE SGLKTFBQVKAIFLHPEPFSEENGLLTPTLAKRGEKLSKYFRTQ IDSLYEHIQD |
| 5452 | 1833 | 1138 | SRVPSLCLSLSLSPSREP VAGAPGCGTAGPPAMATLWGGLLR LGSLLSLSLCLSLSVLLLAQLSDAAKNFEDVRCKCICPPYKENS GIYNKNISQKDCDCLHVVEPMPVRGPDVEAYCLRCCECKYEERSS VTIKVTIIYLSILGLLLLYMVYLTVEPILKRRFLFGHAQLIQS DDDIGDHQPPFANAHDVLAARSRRANVLNKVEYAAQQRWKLQVQE RKSVDHRHVLS |
| 5453 | 111 | 1520 | PSIPAAVPQSAPPEPHREETVTATATSQVAQQPPAAAAPGEQAV AGPAPSTVPSSSTSKDRPVSPSLVGSKEEPPPARSGSGGSSAKE PQEERSQQQDDIEELETKAVGMSNDGRFLKFDIEIGRGSFKTVY KGLDTETTVEVAVWCELQDRKLTKESEQRFRKEEAEMKGLQHPNI VRFYDSWESTVKGKKCIVLVTLEMTSGTLKTYLKRFKVMKIKVL RSWCRQILKGLQFLHTRTPPIIHRDLKCDNIFITGPTGSVKIGD LGLATLKRASFASKVIGTPEFMAPEMYEEKYDESVDVYAFGMCM LEMATSEYPYSECQNAAQIYRRVTSGVKPASFDKVAIPEVKEII EGCIRQNKDERYSIKDLLNHAFFQEEGTGRVLEAEDDGEEKIAI KLWLRIEDIKKLKGYKDNEAIEFSFDLERNVPEDVAQEMVESG YVCEGDHKTMAKAIKDRVSLIKRKEQRQL* |
| 5454 | 111 | 1520 | PSIPAAVPQSAPPEPHREETVTATATSQVAQQPPAAAAPGEQAV AGPAPSTVPSSSTSKDRPVSPSLVGSKEEPPPARSGSGGSSAKE PQEERSQQQDDIEELETKAVGMSNDGRFLKFDIEIGRGSFKTVY KGLDTETTVEVAVWCELQDRKLTKESEQRFRKEEAEMKGLQHPNI |

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|------------|--|--|---|
| | | | VRFYDSWESTVKGKCIVLVTELMTSGTLKTYLKRFRVMKIKVL RSWCRQILKGLQLHTRTPPIIHRDLKCDNIFITGPTGSVKIGD LGLATLKRASFASVIGTPEFMAPEMYEEKYDESVDVYAFGCM LEMATSEYPYSECQNAQIYRRVTSVKVPASFDKVAIPEVKEII EGCIRONKDERYSIKDLLNHAFQEEETGVVVELAEEDDGEKIAI KLWLRIEDIKKLKGKYKDNEAIEFSFDLERNVPEDVAQEMVESG YVCEGDHKTMAKAIDRVSLIKKRREQRL* |
| 5455 | 1359 | 377 | LTMVSPATRKSLPKVKAMDFTITSTAILPFLFGCLGVFGLFRLLQ WVRGKAYLRNAVVTGATSGLGKECAKVFYAAGAKLVLCGRNG GALEELIRELTASHATKVQTHKPYLVTFDLTDSGAIVAAAAIL QCFGYVDILVNNAGISYRGTIMDTTVDVKRVMETNYFGPVALT KALLPSMIKRRQGHIVAIISSIQGKMSIFFRSAYAASKHATQAFF DCLRAEMEQYEIEVTVISPGYIHTNLVNAITADGSRVGVMDTT TAQGRSPVEVAQDVLAAGVKKKKDVIADLLPSLAVYLRTLAPG LFFSLMASRARKERKS KNS |
| 5456 | 2 | 2332 | CGAGLVAAGAVLVLPASRAGERTRVPGSPAPSSLP LHSFGACG TEVDMDPQQRSPLEEVKGNIELKRPLI KAPSQLPLSGSRLKRRPD QMEDGLEBEKKRTRGLGATTKITTSHPVPSLTTPVQTQGGTTA QKVSCKTGPRCSTAIATGLKNQKPVPAVPVQKSGTSGVPPMAGG KKPSKRPADWLKGLCDLNAELKRCRERTQTLDQENQQLQDQLR DAQQQVKALGTERTTLEHGLAKVQAQAEQGGQELKNLRACVLEL EERLSTQEGVLQELQKKQVELQEERRGLMSQLEEKERRLQTSSEA ALSSSQAEVASLRQETVAQAALLTEREERLHGLEMERRLHNLQQL QELKGNIRVFCRVRPVLPGEPPTPPGILLFFSPGPGSPDPPTRL SLRSRSDERRGTLGSGAPAPPTRHDFSFDRVFPFGSGQDEVFEEIA MLVQSALDGPVPCI FAYGQTGSGKTFMEGGPGGDPQLEGILPR ALRHLFSVAQELSGQGWTSFVASYVEIYNETVRDILATGTRKG QGGECEIRRAGPGSEELTVTNARYVPVSCKEVDALLHLARQNR AVARTAQNERSRSHSVFLQLQISGEHSSRGLQCGAPLSLVDLAG SERLDPLGALGPGERERLRETQAINSSLTGLVIMALSINKESH VPYRNSKLTLYLLQNSLGSAXMLMFVNISPLEENVSESLSNLSRF ASKVEPSVLFGTQASNRKWKTDPLCVCVCVCVCVCVCVCVP MSMYRVGRGVRVAGGCFIGWRAPCPRAIK |
| 5457 | 2 | 1540 | DDFVERRRWTRTTCLVRSPPHVPVCGHACSWNGGSLDPLKGTTPA LLRSABRLMRKVKKLRLDKENTGSWRSFSLNSEGAERMATTGTP TADRGDAAATDDPAARFQVQKHSWDGLRSI IHGSRKYSGLTVNK APHDFQFVQKTDESQPHSHRLLYLGMPYGSRENSLLYSEIPKKV RKEALLLSWKQMLDHFQATPHHGVYSREELLREKRRLGVFGI TSYDFHSESGFLFLQASNSLFHCRDGGKNGFMVSPGPGCVSPMK PLEIKTQCSGPRMDPKICPADPAFFSFINNSDLWVANITGEER RLTFCHQGLSNVLDLDPKSAQVATFVIEEFDRFTGYWWCPTASW EGSEGLKTLRLIYEEVDESEVEVIHVPSPALEERKTDVRYPRP GSKNPKIALKLAFQTDSSQGIKIVSTQEKELVQPFSSLPKVEYI ARAGWTRDGKYAWAMFLDRPQQLVLLPPALFIPSTENEEQA ASLCQSCPQCECPAVCGVRGGHQRDLQCS |
| 5458 | 6642 | 4022 | FVPGLREPQWEPAPQPSATMSAPSEEEYARLVMEAPQEWLRAEV KRLSHELAEATTREKIQAAEYGLAVLEBKHLQLQFEELEVDYEA IRSEMOQLKEAFQGAHTNHHKVAADGESREESLIQESASKEQYY VRKVLQLTELKQLRNVLTNTQSENERLASVAQELKEINQNVET QRGRLLRDDIKEYKFEARLLQDYSELEENISLQKQSVLRQNO VEFEGLEKHEIKRLEEBTEYLSQLEDAIRLKEISERQLEBALET LKTEREQKNSLRKELSHYMSINDSFYTSHLHVSLLDGLKFSDDAA EPNNDAEALVNGFEHGLAKPLDNKTSTPKKEGLAPPSPSLVS DLLSELNISETQKLKQQLMQMEREKAGLLATLQDTQKQLEHTRG SLSEQQEKVTRLTENLSALRRLQASKERQTALDNEKDRDSHEDG DYYEVDINGPEILACKYHVAAEAGELREQLKALRSTHEAREQA HABEKGRYEAEQGALTEKVSLEKASRQDRELLARLEKELKKVS DVAGETQGSLSVAQDELVTFSLEELANLYHHVCMCNNETPNRVML DYYREGQCGAGRTSPGGRTSPEARGRSPILLPKGLLAPAGRA DGGTGDSSSPSGSSLPSPSLDPRPEPMNINYLIAIIRDQIKHLQ AAVDRTTLSRQRIASQELGPAVDKKEALMEEILKLSLLSTK |

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|------------|--|--|---|
| | | | REQITTLRTVLKANKQTAEVALANLKSXYENEKAMVETETMMKLR NELKALKEDAATFSSLRAMFATRCDEYITQLDEMQRQLAAAEDE KKTLSNLLRMAIQKALALTQRLELLELDHEQTRRGRAKAAPPTK PATPSVSHTCACASDRAEGTGLANQVFCSEKHSIYCD |
| 5459 | 316 | 1262 | RGGHRLSGMASNFNDIVKQGYVRIRSRRLGIYQRCWLVFKKASS KGPRLLEKFSDERAAYFRCYHKVTELNNVKNVARLPKSTKKHAI GIYFNDDTSKTFACESDLEADEWCKVLQMECVGTRINDISLCEP DLLATGVBEREQSERFNVLMPSNLCGYMGEALQITYEYICLW DVQNPRVKLISWPLSALRRYGRDITWTFEAGRMCECTGEGFLIF QTRDGEAIYQKVHSAALAEQHERLLQSVKNSMLQMKMSERAA SLSTMVPLPRSAWQHITRQHSTGQLYRLQDVSSPLKLRHRTET PAYRSEH |
| 5460 | 45 | 2097 | RPGCRAGELSTGSRARERVRNRVSAPCCQDSRRCDPEVLRGRSP GLGLAEMFSCGACTCGAAAVRLITSSLASAQRGISGGRIHMSVL GRIGTFETQILQAPLRSFTETPAYFASKDGIKSGSGDGNKKS ASEGSSKSGSGNSGKGNQLRCPKCGDLCTHVETVSSSTRFVK CEKCHHFFVVLSEADSKKSIKEPESAAEAVKLAFFQKPPPPPK KIYNYLDKYVVGQSFQKVLVAVYNHYKRIYNNIPANLRQOAE VEQTSLSLTPRELEIRREDEYRFTKLLQIAGISPHGNALGASMQ QQVQQIPQEKRGGEVLDSSHDDIKLEKSNILLGPTGSGKTLT AQTLAKCLDVPFAICDCTTLTQAGYVGEDIESVIAKLLQDANYN VEKAQQGIVFLDEVDKIGSVPGIHQLRDVGGEGVQQGLLKLLEG TIVNVPEKNSRKLGRGETVQVDTTNILFVASGAFNGLDRIISRK NEKYLGFPTPSNLGKGRRAAAAADLANRSGESNTHQDIBEKDRL LRHVEARDLIEFGMIPEFVGRPLVVPVPLHSLDEKTLVQILTEPR NAVIPQYQALFSDMKCELNVTEADKAIARLALERKTGARGLRS IMEKLLEPFMEFVPNSDIVCVEVDKEVVEGKKEPGYIRAPTKE SSBEEYDGSVEBEGWPRQADAANS |
| 5461 | 1481 | 160 | INPPPPKSPCGRARKWRRRRRPGAPEAAVMELPSGPGPERLFD SHRLPGDCFLLLVLLLYAPVGFCLLVLRFLGIHVFLVSCALPD SVLRRFVVRTMCAVLGLVARQEDSGLRDHSVRVLISNHVTPFDH NIVNLLTTCSTPLNSPPSFVCWSRGFMEMNGRGELVESLKRFC ASTRLPPTPLLLFPEEEATNGREGLLRFSSWFFSIQDVVQPLTL QVQRPLVSVTVSDASWVSELLWSLFPFTVYQVRNLRPVHRQLG EANEFFALRVQQLVAKELQGTGTRLTADKAHEHMKRQRHPRLRP QSAQSSFPSPGQSPDVQALATLAQRVKEVLPHVPLGVIQRLDAK TGCVDLPTITNILEGAVAFMPEDITKGTQSLPTASAKFPSSGPV TPQPTALTFAKSSWARQESLQERKQALYEYARRRFTERRAQEAD |
| 5462 | 663 | 3353 | KIKERQMSANNSPPSAQKSVLPTAIPAVLPAASPCSSPKTGLSA RLSNGSFSAPSITNSRGSVHTVSFLLQIGLTRESVTIEAQELSL SAVKDLVCSIVYQKFPECFFGMYDKILLFRHDMNSENILQLIT SADEIHEGDLVEVVLALATVEDFQIRPHILYVHSYKAPTFCDY CGEMLWGLVRQGLKCEGCGLNHYKRCFAFKIPNNCSGVVRKRLSN VSLPGPLSVPRPLQPEYVALPSEESHVHQEPSKRIPSWSGRPIM MEKMMVCRVKVPHTFAVHSYTRPTICQYCKRLLKGLFRQGMQC KDCKFNCHKRCASKVPRDCLGEVTFNGEPSSLCETDIPMDIDN NDINGSRRGLDDTEEPSPPEDKMFLLDPSDLIVERDEEAVKTI SPSTSNMPLMRVVQSIKHTKRKSSTMVKEGWMVHYTSRDNLRK RHYRLDSKCLTLFQNESGSKYYKEIPLSEILRISSPRDTNIS QGSNPHCFEIIITDMVYFVGEMNGDSSHNPLAATGVGLDVAQS WEKAIRQALMPVTPQASVCTSPGQKDKDLSTISVSNCQIQE NVDISTVYQIFADEVLGSGQFGIVYGGKHKRKTGRDVAIKVIDKM RPTKQESQLRNEVAILQNLHHPGIVNLECMFETPERVFMMEK LHGDMLEMLISSEKSRLEPERITKFMVTQILVALRNLHFKNIVHC DLKPENVLLASAEPPQVKLCDFGFARIIIGKSFRRSVVGTTPAY LAPEVLRSKGYNRSLSLDMWSVGVIIVYVLSGTFFPNEDEDINDQI QNAAFMYPPNPWRETSGEADLINLLQVKMRKRYSDVKSLSHP WLQDYQTWLDLREFETRIGERYITHESDDARWEIHAYTHNLVYP KHFIMAPNPDDMEEDP |
| 5463 | 237 | 1012 | LLSVTMTTSRCSHLPEVLDPCTSSAAPVVKTVEDCGSLVNGQPQ YVMQVSAKDGQLLSTVVRTLATQSPFNDRPMCRICHEGSSQEDL |

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|------------|--|--|--|
| | | | LSPCECTGTGTLGTHRSCLHHLSSSNTSYCELCHFRFAVERKPR PLVEWLRNPGPQHEKRTLFGDMVCFLFTPLATISGWLCLRGAV DHLHFSSRLAEVGLIALTVALFTIYLFWTLVSPRYHCRLYNEWR RTNQRVILLIPKSVNVPSPSLGLHLSVKRNSKETVV |
| 5464 | 195 | 677 | SPSMNPRKKVDLKLIIIVGATGVKTSLLHQYVHKTFYEEYQTTL GASILSKIIILGDTTLKLQIWDTGQERVRSMVSTFYKSGDGCILAFDVTDLSEFALDIWRGDVLAKIVPNEQSYPMVLLGNKIDLA DRKYQSILENHLTESIKLSFDQSRSRCC |
| 5465 | 5278 | 3348 | KGDPRFIRVHREALECDYVSAHLHEWIDLIFGYKQGGPAAVEA VNVFHLHFYEGQVDIYNINDPLKETATIGFINNFGQIPKQLFKK PHPPKRVSRNLNGDNAGISVLPGSTSDKIFFHLDNLRPSLTPV KELKEPVGQIVCTDKGILAVEQNKVLIPTWNKTFWAGYADLSC RLGTYESDKAMTVYECLSEWGQILCAICPNPKLVITGGTSTVVC VWEMGTSKEKAKTVTLKQALLGHTDVTVCATASLAYHIIVSGSR DRTCIWDLNKLSELTQLRCHRAPVSALCINELTGDIVSCAGTY THVWSINGNPIVSVNTFTGRSQIICCCMSEMNEWDTONVIVTG HSDGVVRFWRMEFLQVPETPAPEPAEVLEMQEDCPBAQIQGEAQ DEDSDSEADEQSIQDPKDTSPQPSSTSHRPRAASCRATAAWC TDSGSDSRWSQDLSLDEKDGFIIVNYSEGQTRAHLQGPLSH HPNPIEVNYSRLKPGYRWERQLVFRSKLTMTAFDRKDNAPHA EVTALGISKDHSLVGDGRVFSWSVSDQPGRSAADHWVKDE GGDSCSGCSVRFLTERRHCRNCGOLFQCKCSRFSQSEIKRLKI SSPVRVCNQCYNLQHERGSEDGPRNC |
| 5466 | 3 | 992 | HACAHASAHASGRIVRWRKRSSVMGIQTSPVLLASLGVGLVTL LGLAVGSYLVRSSRRPQVTLDPNEKYLRLLDKTTVSHNTKRF RFPALPTAHTLGLPVGKHIYLSRIDGSLVIRPYTPVTSDEDDQ YVDLVIKVYLKGVHPKFFEGGKMSQYLDLSLVGDVVEFRGPSGL LTYTGKGFHNIQPNKKSPEPRVAKKLGMAGGTGTTPMLQLIR AILKVPEDPTQCFLLFANQTEKDIILREDLEELQARYPNRFLW FTLDHPPKDWAYSKGFVTADMIREHLAPAGDDVLVLLCGPPMV QLACHPNLDKLGYSQKMRFTY |
| 5467 | 2103 | 4 | GEALRVGTRGCRDLDPDQARIFIQKDLDEEDSVTAHLKSRG RSPRKIDQFCNSNMVHGSVTFRDVAIDFSQBEWECLQPDQRTL YRDVMLENYSHLISLAGSSISKPDVITLLEQEKEPMMVVRKETS RRYPDLELKYGPEKVS PENDTSEVNLKQVIKQISTTLGIBAFY FRNDSEYRQFEGLOGYQEGNINQKMISYEKLPHTPHASLTCNT HKPYECKECGKYFSCGSNLIQHQS IHTGEKPYKCECGKAFQ LH IQLTRHQKFHTGEKTFECKEKGAFNLPTQLNRHKNHITVKKLF ECKEKGKSFNRSNLQHQSIHAGVQYQCEKGAFNRGSNLI QHQKIHSNEKPFVCKEKGMAFRYHYQLIEHCQIHTGEKPFECKE CGKAFTLLTKLVRHQKIHTGEKPFECRECGKAFSLNQLNRHKN IHTGEKPFECKECGKSFNRSNLVQHQSIHAGIKPYECKEKGK FNRGAHLIQHQKIHSNEKPFVCRECEMAFRYHCQLIEHSRIHTG DKPFECQDCGKAFNRGSSLVQHQSIHTGEKPYECKEKGAFRLY LQLSQHQKTHTEKPFECKECGKFFRRGSNLNQHRS IHTGKKPF ECKEKGKAFRLHMLIRHQKLHTGEKPFECKECGKAFRLHMLI RHQKLHTGEKPFECKECGKVFLPTQLNRHKNHITGEKAS |
| 5468 | 225 | 2976 | SFLTDLFQSLAQLENLCKQLYETDITTTTLQAEKALVEFTNSPD CLSKCQQLLLERSSSSYSQLLAATCLTKLVSRITNNPLPLEQRIDI RNYVNLNLTATRPKLATFVTQALITLYARITKLGWDFCQKDDYVF RNAITDVTRFLQDSVEYCIIGVTILSQTNEINQVSATAFLIEA DTHPLTKIRKIASSFRDSSLFDFITLSCNLLKQASGKNLNLND ESQHGLLMQLLKLTHNCLNDFICTSTDESSDDLCTVQIPTSWR SAFLDSSLQLSTIGRCEYEKTCALLVQLFDQSAQSYQELLSA SASPMDIAVQEGRLTWLVYIIGAVIGGRVSFASTDEQDAMDGEL VCRVLQLMNLTDSRLAQAGNEKLELAMLSSFFEQFRKIYIGDQVQ KSKLYRRLSEVLGLNDETMLVSVFIGKIITNLKYWGRCEPITS KTLQLLNDLSIGYSSVRKLVKLSAVQFMLNHTSEHFSPLGINN QSNLTDLMRCRTTFYTALGRLLMVDLGEDEDEQYEQFMLPLTAAEF AVAQMFSTNSFNEQEAARTLVGLVRDLRGIAFAFNAKTSFMMLEF EWIYPSYMPILQRAIELWYHDPACTFVLKLMABLHNRSQRLQ |

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|------------|--|--|--|
| | | | FDVSSPNGILLFRETSKMITMYGNRIITLGEVFKDQVYALKLKG ISICFSLKKAALSGSYVNFVFRLYGDDALDNALQTFIKLLLSI PHSDLLDYPKLSQSYSLLEVLTDHMFNFIASLEPHVIMYILSS ISEGLTALDTMCTGCCCLDHTVTLFKQLSRSTKKRTTPLNO ESDRFLHIMQQHPMIOQMLSTVLNIIIFEDCRNQWSMSRPLIG LILLNEKYFSDLRNSIVNSQPPKQQAHLFCFENLMGIERNLL TKNRDRFTQNLASFRREVNDSMNSTYGVNSNDMMMS |
| 5469 | 134 | 2653 | DQEFETSLVPWHLEMGWLCGGLFPVSCVLVLQVASSGNMKVLQ EPTCVSDYMSISTCEWMKNGPTNCSTELRLLYQLVLLSEAHTC VPENNGGAGCVCHELLMDVVADNYTLDLWAGQQLLWKGSFKPS EHVKPRAPGNLTVHTNVSDTLTWSNFPYPPDNYLYNHLTYAVN IWSENDPADFRIYNTVYLEPSLRIAASTLKSGISYRARVRAWAQ CYNTTWSEWSPSTKWHNSYREPFQHLHLLGVSVSCIVILAVCLL CYVSITIKIKKEWWDQIPNPARSRLVAILIQDAQGSQWEKRSRQ EPAKCPHWKNCCLKLPCLFLEHNMKRDEDPHKAAKEMPPQGSQK SAWCPVEISKTVLPESLSVVRCEVELFEAPVECEBEEVEVEEKQ SFCASPESSRDDFQEGREGIVARLTESLFDLLGGEENGFPQQD MGESCLLFPSSGSTSAHMPWDEFPSAGPKEAPPWGKEOPLHLEPS PPASPTQSPDNLTCTETPLVIAGNPAYRSFNSLSQSPCPRELQ PDPILLARHLEEEPEMPCVPQLSEPTTVPQPEPETWEQILRRNV LQHGAAPVSAFTSGYQEFVHAVEQGGTQASAVVGLGPPGEAG YKAFSSLLASSAVSPEKCGFGASSGEGYKPFQDLIPGCPGDPA PVPVPLFTFGLDREPPRSPQSSHLPSSSPEHLGLEPGEKVEDMP KPLPLQEQATDPLVDSLQSGIVYSALTCHLCGHLKQCHGQEDGG QTPVMASPCCGCCGDRASPPTPLRAPDPSPGGVPLEASLCPA SLAPSGISEKSKSSSFHPAPGNAQSSSQTPKIVNFVSVGPTYM RVS |
| 5470 | 17 | 1418 | TACRIRTSINRGTAAVKEDAVEMLASYGLAYSLMKFFTGPMDSF KNVGLVFVNSKRDRTKAVLCMVVAGATAAVFHTLIAYSDLGYYI INKLHHVDESUGSKTRRAFLYLAAPPFMDAMAWHAGIILKHXY SFLVGCASTSDVIAQVVFVAILLHSHLECREPELLIPILSLYMG LVRCTTLCGLYYKNIHDIIPDRSGPELGGDATIRKMLSFVWPLA LILATQRIISRPVNLVFSRDLGSSAATEAVAILTATYPVGHMP YGLWTEIRAVYPAFCKNPNPNKLVSTNTVTAHKKFTFVCM LSLTLCFVMFWTPNVSEKILIDIIGVDFAFELCVVPLRIFSF PVPVTVRAHLTGWMLTKKTFVLAPSSVLRIIVLASLVVLPYL GVHGATLGVGSLLAGFVGESTMDAIAACYVVRKQKKMENESAT EGEDSAMTDMPTTEZVDIVEMRENE |
| 5471 | 1868 | 658 | RSSAPPGPQRAAAATAAAAAAGVEMAAAAAQGGGGGEPRRTG GGVPGVEVEMVKGQPPDVGPRYTQLQYIGEGAYGMVSSAYDHR KTRVAIKKISPFHQTYCQRTLREIQILLRFRHENVIGIRDILR ASTLEAMRDVYIVQDLMETDLYKLLKSQQLSNDHICYFLYQILR GLKYIHSANVLHRDLKPSNLLINTTCDLKICDFGLARIADPEHD HTGFLTEYVATRWYRAPEIMLNSKGYTKSIDIWSVGCILAEMLS NRPIFPKHYLDQLNHILGILGSPSQEDLNCTINMKARNVQLSL PSKTKVAVAKLFPKSDSKALDLDRLMTFNPENKRITVEEALAH YLEQYDPTDEPVAEFPFTFAMELDDLPKERLKEIFQETARFQ PGVLEAP |
| 5472 | 1469 | 753 | LYVMARYLSDEEVAVSIDRLCKANGERSPTIPFGTVRIPGRARVR DPQALWIFGYGSLVWRPDPFAYSDSRVGFVRGYSRRFWQDIFHR GSDKMPGRVVTLLLEDHEGCTWGVAYQVQGEQVSKALKYLNVREA VLGGYDTKEVTFYPQDAPDQPLKALAYVATPQNPGLYPAPPEEA TATQILACRGFSGHNLEYLLRVRDVMQLCGPQAQDEHLAAIVDA VGTMLPCFCPTQALALV |
| 5473 | 3 | 2119 | FMNVKLLIQDLEDIEQRVPVMDAQYKIITKTAHLITKESPPQEEG KEMFATMSKLKEQLTKVKECYSPLLYESQQLLIPLEELEKQMTS FYDSLKINELIITVLAREAQSALFKQKHQELLACQENCKTILT LIEKGSQSVQKFVTLNVLKHFQDTRLQRQIADIHVAFQSMVKK TGDWKKHVEITSRLMKFEBESRAELEKVLRIAQGLEEKGDPEE LLRRHTEFFSQLDQRLVNAFLKACDELTDILPEQEQQQLQEAVR KLHKQWKDLQGEAPYHLLHLKIDVEKNRFLASAECELTDRBT |

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|------------|--|--|--|
| | | | KLMPQEGSEKIIKEHRVFFSDKGPHHLCEKRLQLIBELCVKLFPV RDPVRDTPGTCVILKELRAAIDSTYRKLMEDPDKWKDYTSRFS EFSSWISTNETQLKGIGEAIDTANHGEVVKRAVEEIRNGVTKRG ETLSWLKSRLLKVLTEVSSENEAKQKQDELAKLSSSFKALVTLIS EVEKMLSNFGDCVQYKEIVKNSLEELISGSKEVQEQARKILDTE NLFEAQQLLLHHQKQTKRISAKKRDVQQQIAQAQQGEGGLPDRG HEELRKLESTLDGLERSRERQERRIQVTLRKWERFETNKETVVR YLFQTGSSHERFLSFSSLESLSSELEQTKEFSKRTESIAVQAEN LVKEASEIPLGPQNKQLLQQQAKSIKEQVKKLEDTEEBEYVIDK S |
| 5474 | 2 | 780 | TPDVRQLQASRRGI AVASWCSPRWFAGEEMAFVKSGWLLRQSTI LKRWKKNWFDLWSDGHLIYYDDQTRQNI EDKVHMPMDCINIRTG QECRDTPPDGKSKDCMLQIVCRDGRITSLCAESTDDCLAWKFT LQDSRTNTAYVGSAMVTDETS VVSSPPPYTAYAAPAEVGRTLS LQQAYGYGPGGAYPPGTQVVYAANGQAYAVPYQYYPAGLYGQQ PANQVI IRERYRDNDSDLALGMLAGAAATGMALGSLFWVF |
| 5475 | 2 | 506 | ARGWLESLSLTCQTTPPPSSPCLLHSPETFIHTMPNLTGYRRF VSQKNMEDYQLALNISLAVRXIALLLKPKDKEIEHQGNHMTVRTL STFRNYTVQFDVGVEFEEDLRSVDGRKCQTIVTWEEHLVCVQK GEVFNRGWRHWLEGEMLYLELTARDACEQVFRKVR |
| 5476 | 192 | 1457 | SDSMSLLDCFCSTRTQVESLRPEKQSETSIHQYLVDPEPTLSWSR PSTRASEVL CSTNVSHVELQVEIGRFDNLTSVHLARHTPTGTL VTIKITNLENCNEERL KALQKAVILSHFFRHPNITTYWTVFTVG SNLWVISPFMAYGSASQLLRTYFPEGMSSETLIRNIFGAVRGLN YLHQNGCIHRSIKASHILISGDGLVTL SGLSHLSLVKHGQRHR AVYDFPQFSTSVQPWLSPELLRQDLHGYNVKS DIYSVGITACEL ASGQVPPQDMHRTQMLLQKLKGPYPSPLDISIFPQSES RMKNSQ SGVDSGIGESVLVSSGTHTVNSDRLHTPSSKTFSPAFFSLVQLC LQQDPEKRPSASSLLSHVFFKQMKESQDSILSLPPAYNKPISI SLPPVLPWTEPECDFPDEKDSYWEF |
| 5477 | 3 | 1044 | RGNSRLRYSHDELQPLRLPELFETGRQLLDEVEVATEPAGSRI VQEKVFKGLDLLEKAAEMLSQLDLFSRNEDLEEIASTD LKYLLV PAFQGALTMKQVNP SKRLDHLQRAREHF INYLTQCHYHVAEFE LPKTMNNSAENHTANSSMAYPSLVAMASQQAQI QRYKQKKELE HRLSAMKSAVESGQADDERVREYLLHLQRWIDISLEEIES IDQ ETIKILRERDSSREASTSNSSRQERPEVVKPILTRNMAQAKVFGA GYPSLPTMTVSDWYEQHRKYCALPDQGI AKAAPBEFRKAQQQE EQEKEEEDDEQTLHRAREWDDKDTHPRGYGNRQNMG |
| 5478 | 2 | 835 | KTVRIWVPNVKGESTVFRAHTATVRSVHFCSDGQSFVTASDDKT VKVWATHRQKFLFSLSQHINWVRC AKFSPDGR LIVSASDDKT VK LWDKSSREC VHSYCEHGGFVTYVDFHPSGTCIAAAGMDNTVKVW DVRTHRLLQHYQLHSAAVNGLSFHPSGNYLITASSDSTLKILD MEGRLLYTLHG HQGPATTVAFSRTGEYFASGGSD EQVMVWKS NF DIGDHGEVTKVPRPPATLASSMGNLTVSILEQRLTLEEDK LKQC LENQQLIMQRATP |
| 5479 | 2 | 835 | KTVRIWVPNVKGESTVFRAHTATVRSVHFCSDGQSFVTASDDKT VKVWATHRQKFLFSLSQHINWVRC AKFSPDGR LIVSASDDKT VK LWDKSSREC VHSYCEHGGFVTYVDFHPSGTCIAAAGMDNTVKVW DVRTHRLLQHYQLHSAAVNGLSFHPSGNYLITASSDSTLKILD MEGRLLYTLHG HQGPATTVAFSRTGEYFASGGSD EQVMVWKS NF DIGDHGEVTKVPRPPATLASSMGNLTVSILEQRLTLEEDK LKQC LENQQLIMQRATP |
| 5480 | 444 | 1952 | LSLTSRMEEABLVKGRQLQAITDKRKIQEETISQKRLKIEEDKLKH QHLKKKALREKWLIDGISSGKEQEEMKQKQDQHQIQVLEQSI LRLEKEIQDLEKAE LQISTKEEAILKKLKS IERTTEDI IRSVKV EREERAEESIEDIYANIPDLPKSYIPSLRKEINEEKEDDEQNR KALYAMEIKVEKDLKTGESTVLSSIPLPSDDFKGTG I K VYDDGQ KSVYAVSSNHSAAAYNGTDGLAPVEVEELLRQASERN SKSPTEYH EPVYANPFYRPTTPQRETVP GP NFQERIKIKTNGLGIGVNESI HNMGNLSEERGNFNHISPIPPVPHPRSVIQQAEEKLHTPQKR |

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|------------|--|--|--|
| | | | LMTPEESNVQMCDKAPSPKPRLSPRETIFGKSEHQNSSPTCQE DEEDVRYNIVHSLPPDINDTEPVTMIFMCYQQAEDSEEDKKFLT GYDGIHAELVVIDDEEEDEGEAEKPSYHPTAPHSQVYQPAKP TPLPRKRSEASPHEKHKHS |
| 5481 | 3 | 1422 | NSPGSVCLQCVCPSLLHCLPPLLLLLLLPLLLHESQPPPALRV VATSSDRNFMNKHQKPVLTGQRFKTRKDEKEKEFEPTVFRDITLV QGLNEAGDDLEAVAKFLDSTIGSRDLVRRYADTLFDILVAGSMLA PGGTRIDDDGDKTKMTNHCVFSAEDHETIRNYAQVFNKLIRRYK YLEKAFEDDEMKKLLFLKAFSETEQTKLAMLSGILLGNGTLPAT ILTSLFTDSLVEKGTAAFAVKLFKAWMAEKDANSVTSRLKAN LDKRLLLELFPVNRQSVDFHAKYFTDAGLKELSDFLRVQSSLGTR KELQKELQERLSQBCPIKEVVLYVKEEMKRNDLPETAVIGLLWT CIMNAVEWNKKEELVAEQALKHLKQYAPLLAVFSSQGGSELILL QKVQEQCYDNIHFMKAFQKIVLVFYKADVLSEAILKWKYKEAHV AKGKSVFLDQMKKPFVEWLQNAEESESESEGEEN |
| 5482 | 1492 | 528 | THVMTGMCYAPHQVLSYINGVTTSKPGVSLVYSMPSRNLSRL EQLQEKDGGPYSCSVNVQDKQKSRGHSIKITLNLNLVPPAPES CRLQGVPHVGANVTLSCQSPRSKPAVOYQOWDRQLPSQTFPAPA LDVIRGSLSLTNLSSSMAGVYVCKAHNEVGTAQCNVLEVSTGP GAAVVAGAVVGTTLVGLGLLAGLVLLYHRRGKALEEPANDIKEDA IAPRTLWPWKSSDTISKNGTLSSVTSARALRPPHGPFRPGALT TPSSLSSQALPSPRLPTTDGAHPQPISPIPGGVSSSGLSRMGAVP VMVPAQSQAGSLV |
| 5483 | 1 | 788 | FFPFKGCGRAGRNESDYRKLEEMHQRFLVRSERKDDLQLRLTRA ENRIKQLETDSSSEISRYQEMIKQLQNVLESERENGLVSEQRLL KLQGENKQLRKETESLRKIALEAQKKAKVKISTMEHEFSIKERG FEVOLREMEDSNRNSIVELRHLLATQKKAANRWKEETKKLTESA EIRINNLSKELSRQKLHTQELLSQLEMANEKVAENEKILILEHQE KANRLQRRLSQAEERAASASQQLSVITVQRRKAASLMNLENI |
| 5484 | 3 | 1997 | IMADMEDLFGSDADSEAEKRDSDSGSDSDSQENASGSNASGS ESDQDERGDSGQPSNKEFGDDSEDEGASHHSGSDNHSERSDNR SRASERSDHEDNDPSVDVQHSGSEAPNDDEDEGHRSDGGSHSE AEGSEKAHSDDEKWRGREDKSDQSDDEKIQNSDDEERAQGSDEDK LQNSDDDEKMQNTDDEERPQLSDDERQQLSEEEKANSDDERFVA SDNDDEKQNSDDEEQQLSDDEKMQNSDDERPQASDEEHRHSDD EEEQDHKSESARGSDSEDEVLRMKRKNALIASDSEASDTEVFKD NSGTMDLFGGADDISSGSDGEDKPPTPGQPDENGLPDQDQEE PIPETRIEVEIPKVNTDLGNDLYFVKLPNFLSVPRPFDQYYE DEFEDDEMLDEGRIRLKLKVENTIRWRIRDEEGNEIKESNAR IVKWSGSGMSLHLGNEVFDVYKAPLQGDHNLHFIROGTGLQQA VFKTKLTFRPHSTDSATHRKMTLSLADRCSTQKIRILPMAGRD PECQRTMIIKKEERLRASIRRESQQRMRREKQHQRLSASYLE PDRYDEEEEGEESISLAAIKNRYKGGIREERARIYSSDSDEGSE EDKQRLKAKKLTSDVVRPNLFNSRGLSCTQEPALNEELTDQ AGTN |
| 5485 | 161 | 1074 | KRKILSSMMDSEAEKRPPILTSSKQDISPHITNVGEMKHYLCG CCAAFNNVAITFPQKVLFRQQLYGIKTRDAILQLRRDGFNRLY RGILPPLMQKTTLALMFLGYEDLSCLLHKHVSAPFATSGVAA VLAGTTAIFTPLERVQTLQDQKHHDKFTNTYQAFKALKCHGI GEYYRGVLVPILFRNGLSNVLFGLRGPIKEHLPTATTHSAHLVN DFICGGLLGAMLGFLFFPINVVKTRIQQSQIGGFQSFPPKVFQKI WLERDRKLINLFRGAHLNHYHRSLSISWGINATYEFLLKVI |
| 5486 | 1404 | 142 | IPGSTISWSPAAAGLSVCRCRLHPASAMDLFGDLPEPERSPR PAAGKEAQKGPILLFDDLPASSTDSGSGGPIILFDDLPASSGDS GSLATSISQMVKTEGKAKRKTSEEEKNGSEELVEKKVKCASSV IFGLKGYVAERKGEREEMQDAHVILNDITECRPPSSLITRVSY FAVFDHGGGIRASKFAAQNLHQLNLRKFPKGDVISVEKTVKRC LDTFKHTDEEFLKQASSQKPAWKDGSTATCVLAVDNILYIANLG DSRAILCRYNEESQKHAALSLSKEHNPTQYERMRIQKAGGNVR DGRVLGVLEVSRSIGDQYKRCGVTSVPDIRRQCLTPNDRFILL |

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|------------|--|--|---|
| | | | ACDGLFKVFTPEEAVNFILSCLEDEKIQTRREGKSAADARYEAAAC NRLANKAVQRGSALNVTVMVVRIGH |
| 5487 | 535 | 182 | AVSLEQIRGLQTPAPVPLPLQPCPSNCDMERVTLALLLLAGLTA LEANDPFANKDDPFYYDWNQLQSLGICGGLLAIAAGIAAVLSGK CKCKSSQKQHSVPPEKAIPLITPGSATT |
| 5488 | 1072 | 259 | AMAAAGEPCQRQWQEEVAAVVVVGSCMTDLVSLTSRLPKTGETH GHKFFIFGPGKGANQCVQAARLGAMTSMVCKVGKDSFGNDYIEN LKQNDISTEFTYQTKDAATGTASIIVNNEGQNIIVIVAGANLLL NTEDLRAANVISRAKVMVCQLEITPATSLAALTMAARRSGVKTL FNPAPAIADLDPQFYTLSDVFCNESEAEIITGLTVGSAADAGE AALVLLKRGCVVITLGAEGCVVLSQTEPEPKHIPTKVKAVD TTVSFKI |
| 5489 | 81 | 893 | GKGPVAAFIDQSNIFLTDPKIFLGQWREEPKMPLLLLGETEPLK LERDCRSFVEPWAAASPDALACLCHCQDLSSGAFPNRGVLGGV LFPTVEMVIKVFVATSSGSIARKKQQEVVGFLEANKIDFKELD IAGDEDNRRWMRENVGEEKKPNQGIPLPPQIFNEEQYCGDFDSF FSAKEENIIYSFLGLAPPPDSKGSEKAEEGGETEAQKEGSEDDVG NLPEAQEKNEEEGETATEETEETIAMEGAEGEAEETAEGETE GEDEDS |
| 5490 | 81 | 893 | GKGPVAAFIDQSNIFLTDPKIFLGQWREEPKMPLLLLGETEPLK LERDCRSFVEPWAAASPDALACLCHCQDLSSGAFPNRGVLGGV LFPTVEMVIKVFVATSSGSIARKKQQEVVGFLEANKIDFKELD IAGDEDNRRWMRENVGEEKKPNQGIPLPPQIFNEEQYCGDFDSF FSAKEENIIYSFLGLAPPPDSKGSEKAEEGGETEAQKEGSEDDVG NLPEAQEKNEEEGETATEETEETIAMEGAEGEAEETAEGETE GEDEDS |
| 5491 | 204 | 1194 | GSAPRLSLGPTGAQARDPDWWARPPSRPYTQSKEDRPDTEGRSE QGDMASSFLPAGAITGDSGGELSSGDDSGEVEFPSPHSEIETSC LAELFEKAAAHLLQGLIQVASREQLLYLYARYKQVKVGNCTPKP SFFDFEGKQKWEAWKALGDSSSPSQAMQEYIAVVKLDPGWNPI PEKKGKEANTGFGGPIVSSLYHEETIREEDKNIFDYCRENNIDH ITKAIKSKNVVDVNVKDEEGRALLHWACDRGHKELVTVLQHRAD INCQDNEGQTALHYASACEFLDIVELLLQSGADPTLRDQDGLP BEVTGCKTVSLVLQRHTTGKA |
| 5492 | 3 | 1896 | ASKNPLSAVCTTGIMSSLAVRDPAMDRLSLRSVFGNIPYEATEE QLKDI FSEVGSVVSFRLVYDRETGKPKGYGFCFYQDQETALSAM RNLNGREFSGRALRVDNAASEKNKEELKSLGPAAP I IDSPYGD IDPEDAPESI TRAVASLPPEQMFMELMKQKLCVQNSHQEARNML LQNPQLAYALLQAQVVMRIMDPEIALKILHRKIHVTPLIPGKSQ SVSVSGPGPGPGGLCPGPNVLLNQNPAPAPQCHLARRPVKDI PPLMQTPIQGGIPAPGPIPAAVPGAGPGSLTPGGAMQPQLGMGP VGPVPLERGQVQMSDPRAPIPRGPVTPGGILPPRGLLGDAPNDPR GGTLLSVTGEVEPRGYLGPPHGGPPMHASGHDTRGPPSSHEMRG GPLGDPRLIDGEPRGPMIDQRLPMDGRGGRDSRAMETRAMETE VLETRVMERRGMETCAMETRCMEARGMDARGLEMGRPVPSSRGP MTGGIQCPCPINIGAGGPPQGPQVPGISGVGNPGAGMQGTGIQ GTGMQGAGIQGGGMQGAGIQGVSIQGGGIQGGGIQGGASQGGSSQ PSSFSFGQSQVTPQDQEKALIMQVLQLTADQIAMLPPEQRQSI LILKEIQKSTGAS |
| 5493 | 1 | 1876 | RAPMMTKAVPEEPRKPGRLTQALNSPLTWEHVWICVPGCTPDCL TDTFRVKRPHLRRSASNGHVPCTPVYREKEDMYDEIIEBKSLH VQKSDVDLMRTKLRLLEEENSRKDRQIEQLLDPSTGTFVRLTA EKRPDASWVINGLKQRIKLEQQCKEKDGTISKLOTDMKTTNLE EMRIAMETYYEEVHRLQTLTASSSETTGKKPLGEKKTGAKRQKKM GSALLSLSRVQELTEENQSLKBDLDRVLSTSPITISKQGYVEW SKPRLLRRI VELEKKLSVMESSKSHAABFVRSHPACCLASSAL HRQPRGDRNKDHERLGAVRDLKEERTALQEQLLQRDLEVKQLL QAKADLEKELEECAREGEBEEREREVEVLREBIQTLTSLKLEQEM KKEEKEDCEVPHKAQELPAPTSSRHCEQDWPDPSSBGLPRP RSPCSDGRRDAAARVLQAQWKVYKHKKKKAVLDEAAVVLQAAFR |

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|------------|--|--|--|
| | | | GHLTRTKLLASKAHGSEPPSVPLPDQSSPVPRVPSPIAQATGS PVQEEAIVIIQSALRAHLARARHSATGKRTTTAASRRRSASAT HGDASSPPFLAALPDPSPSGPQAVAPLEGGDDVNSDDSDDIVIAP SLPTKNFPV |
| 5494 | 71 | 536 | RSKAKIGTPTREVPSTDMKVRRESSSLTHRPAPSPATPRLTGT RRVLLGVSEGTGCADAMELVLVFLCSLLAPMVLASAEKESKMD PFHYDYQTLRIGGLVFAVVLFSVGILLILSRCKCSFNQKPRAP GDEEAQVENLITANATEPQKAEN |
| 5495 | 273 | 2168 | DSLLLIQVDTMPFTLHLRSRLPSAIRSLILQKKPNIRNTSSMAG ELRPASLVVLPRLAPAFERFCQVNTGFLPLLGQSEPEKMWLPP QGAISETRMGHPQFWKYEFGACTGSLASLEQYSEQLKDMVAFFL GCSFSLBEALEKAGLPRRDPAGHSQAGAYKTTVPCVTHAGFCPP LVVTMRPIPKDKLEGLVRACCSLGGEQGPVHMGDPELLGIKEL SKPAYGDAMVCPGPEVPVFWPSPLTSLGAVSSCETPLAFASTPG CTVMTDLKDAKAPPGLCTPERIPEVHHISQDPLHYSIASVSASQ KIRELESMIGIDPGNRGIGHLLCKDELLKASLSLSHARSVLITT GPFTHFNHEPPEETDGGPVALVAFLLQALEKEVAIIVDQRAWN LHQKIVEDAVEGQVLKTQIPILTYQGGSVAAQAFCKNGDPQT PRFDHLVAIERAGRAADGNYYNARKMNIKHLVDPIDDLFLAAKK IPGISSTGVGDGNGELGMGKVEAVRRHIRHGDVIACDVEADFA VIAGVSNWGGYALACALYILYSCAVHSQYLKRAVGPSPRAPGDQA WTQALPSVIKEEKMLGILVQHKVRSVSGIVGMEVDGLPFPNTH AEMIQKLVDVTTAQV |
| 5496 | 3 | 2408 | QDTKMHEITYKGNITPQLNKNLTLSAATDVWAVYFSQFWIDYEG MKSCKGRFISFVDSFPLSIWICQPTRYAESQKEPQTCNQVSLNT SQSESSDLAGRLKRLKLLKEYYSTESEPLTNGGQKPSSTDTFFR FSPSSSEADIIHLVHVHKKHVMQINHYOYLLLLFLHESLILSE NLRKDVAVTGPSPASQTSICIGILLRSALALLHPVDQANTLK SPVSESVSPVVDYLPTENGDFLSSKRRKQISRDINRISVTVNH MSDNRSMSVDLSHIPKDPPLLFKSASDTNLQKGISFMDYLSDKH LGKISEDESSGLVYKSGSGEIGSETSDKKDSFYTDSSSVLNYRE DSNLSFDSGDNQNILSSTLTSGKNETIESIFKAEDLLPEAASL SENLDISKEETPPVRTLKSQSSLSGKPKERCFFNLAPLCVSYKN MKRSSSQMSLDTISLDSMILEEQLLSDDSGSDSHMFLEKGNKKNS TTNYRGTAESVNAGANLQNYGETSPDAISTNSEGAQENHDDLMS VVVFKITGVNGEIDIRGEDTEICLOVNVQVTPDQLGNISLRHYLC NRPVGSDQKAVIHSKSPFISLRFESGPGAVIHSLLAENKNGFLQ CHIKNFSTFLTSSLMNIQHFLDEDETATVMPMKIQVSNTKINL KDDSPRSSTVSLPAPVTVHIDHLVVERSDDGSFHIRDSHMLNT GNDLKENVKSDSVLLTSGKYDLKKQRSVTQATQTSFPGVPWFSQS ANFPEFSFDFTRQELMBENESLQELAKAKMALAEAHLEKDALL HHIKKMTVE |
| 5497 | 1821 | 3308 | SISKLLKRRSNIDAYLLSNSCAFFAPRLFSLASQIIREQQSPNV CFIYKYSGFPSLECCQCHFVSPHSSCYINFFSFPFPFVCFQLSN GFSHYLSSESHVGPTGAGLFPHCLPASRLLPRTSVHLDPDYAH YYTIGPGMFPSSQIPSWKDWAKPGPYDQPLVNTLQRRKEKREPD PNGGGPTTASGPPAAAEQAQRPRMTVSAATRPGEEMEACEELA LALSRGLQLDQRRSRDSLQCSSGYSTQTTTPCCSEDTIPFSQS DYDFSVSQDQADQEQEFDKSSTIPRNSDISQSYRRMFQAKRPA STAGLPTTLGPAMVTPGVATIRRTPTSTKPSVRRGTIGAGPIPIK TPVIVPVTPTVPDLPGVLPAPPDGPEERGEHSPSPSVGEGPQG VTSMPSMWSGQASVNPPLPGPKPSIPPEHRQAIFESAEDQBR EPPSATVSPGQIPESDPADLSPRDTPQGEDMLNARRGVKLKKT TTNDRSAPRFS |
| 5498 | 2434 | 1492 | ILTHQBIFTGEKPCCEGKASIQMSHLSQQKIYSGENPFACKVCG KVFSHKSNLTHEHEFHTRKPFECNECGKAFSQKQYVIKHQNIH TGEKLFECNECGKSFSQKENLLTHQKIHTGEKPFCKDCGKAFI QKSNLIRHQRTHTGEKPFVCKEKGKTFSGKSNLTHEHEKIHIGEK PFKCECGTAFGQKKYLIKHQNIHTGEKPFECNECGKAFSQRTS LIVHVRIHSGDKPYECNVCGKAFSQSSSLTVHVRSHTEGKPYGC NECGKAFSOPSTLALHLRIHTGKRPYQCSECGKAFSQKSHHIRH |

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|------------|--|--|---|
| 5499 | 324 | 926 | QKITHH GFGQICRGHKITTYPFSPRKSGRKGMAQSQGWVKRYIKAFCKGF FVAVPVAVTFLDRVACVARVEGASMQPSLNPQGSQSSDVLLNH WKVRNFVHRGDIVSLVSPKNPEQKI I KRVIALEGDIVRTIGHK NRYVKVPRGHIWVEGDHGHHSFDSNFGPVSIGLLHAHATHILW PPERWQKLESVLPPLPRLPVQREEE |
| 5500 | 1978 | 1286 | KPDWRLQNLPPRLYLWRSSRFQGHLLKRLQMDFKIEHTWDGFP VKHEPVFIRLNPGRGVMMDISAPFFRDPPAPLGEPEGKPFNELW DYEVEAFAFLNDITEQYLEVLCPHGQHLVLLSGRRNVWKQEL PLSFRVSRGETKWEGKAYLPWSYFPPNVTKFNSFAIHGSKDKRS YEALYPVPQHQLQGGQKPDFHCLEYFKSFNFNTLLGEEWQKPES DLWLEIKCDI |
| 5501 | 2927 | 2226 | CRPPVSARVAPGHQGAVGSGRRPARVEVVDAAARPSRRPFLP AAIMLALISRLDWRSLFWKEEMELTLVGLQYSGKTTFFNVNIA SGQFSEDMIPTVGFNMRKVTGKNTIKIWDIGGQPRFRSMWERY CRGVNAIVYMIDAADREKIEASRNELHNLDDKPLQGIPLVLVG NKRDLNALDEKQLIEKMNLISAIQDREICCYSSISCKEDNDIT LQWLIOHKSRSRS |
| 5502 | 3 | 824 | NSAFFVWVPERTALLTCPLGAAPGSREAPGIAGPPNSTAMSKL GKFFKGGSSSKSRAAPSPQEAALVRLRETEMLGKKQYELENRIQ REIALAKKHGTQNKRAALQALKRKRFEKQLTQIDGTLSTIEFQ REALENSHTNTEVLRNMGFAAKAMKSVHENMDLNKIDDLMQEIT EQODIAQEISEAFSQRVGFDDFDEDELMAELEEELEQEELNKKM TNIRLPNVPSSSLPAQPNRKPMSSTARRSRAASSQRAEEEDDD IKQLAAWAT |
| 5503 | 216 | 654 | KGVRRRGRVRSDSEDSHLGYFKMSFLLPKLTSKKEVDQAIKSTA EKVLVLRFGRDEDPVCLQLDDILSKTSSDLSKMAIYLVVDVDT AVYTQYFDISYIPSTVFFENGQHMKVVDYGGEDPALRSIKAVRRT SPAGTLGKPVNS |
| 5504 | 58 | 3563 | QLSFSFQAPVTFDDITVYLLQBEWVLLSQOQKELCGSNKLVAPL GPTVANPELFRKPGRGPEFWLGSVQQQRSLLEHHPGKKQMGYMG EMEVQGPTRSGQSLPPQKKAYLSLSTGSGHIEGDWAGNRKL LKPRSIQKSWFVQFPWLIMNEEQTALFCSACREYPSIRDKRSRL IEGYTGPFKVKETLKYHAKSKAHMFCVNALAARDPIWAARFSIR DPPGDVLASPEPLFTADCPIFYPPGPLGGFDSMAELLPSRAEL BDPGGDGAI PAMYLDICISDLRQKEITDGIHSSSDINILYNDAVE SCIQDPSAEGLESEVPVVFEEPLPVVFEDVAVYFTREEWGLDKR QKELYRDMRMNYELLASLGPAAAKPDLSKLERRAAPWIKDPN GPKWKGCRPPGNKKNVAVREADTQASAADSALLPGSPVEARASC CSSSICEEGDGPRRIKRTYRPRSIQRSWFGQFPWLVIDPKETKL FCSACIERPNLHDKSSRLVRGYTGPFKVKETLKYHEVSKAHLRCV NTVEIKEDTPHTALVPEISSDLMANMEHFFNAAYS IAYHSRPLN DPEKILQLLQSTGTVILGKYRNRTACTQFIKYISETLKREILED VRNSPCVSVLLDSSDASEQACVGIYIRYFKQMEVKESYITLAP LYSETADGYFETIVSALDELDIPFRKPGWVVLGTDGSAMLSCR GGLVEKFQEVIPQLLFPVHCVAHRLHLAVVDACGSIDLVKKCDRH IRTVFKFYQSSNKRNLNELQEGAAPLEQEIIRLKDNLAVRWVAVSR RRTLHALLVSWPALARHLQRAEAGGQIGHRAGMLKLMRGFHF VKFCHFLDLFLSIYRPLSEVCQKEIVLITEVNATLGRAYVALES LRHQAGPKKEEFNASFKDGRHLGICLDKLEVAEQRFQADRERTV LTGIEYLLQRFADADRPQLKNMEVFDTMAWPSGIELASFGNDI LNLARYFECSLPTGYSEEALLEEWLGLKTIQHLPPFSLCKNAL AQHCRFPLLSKLMAVVVCVPISTSCCERGFKAMNRI RTDERTKL SNEVLNMLMMAVNCVAVTEYDQPAIQHWYLTSSGRFSSHVYT CAQVPARS PASARLRKEEMGALYVEEPRTQKPPILPSREAAEVL KDCIMEPPERLLYPHTSQEAPGMS |
| 5505 | 3312 | 1219 | NCSPRSLSAAKMSNRNNNKLPSNLPQLQNLIKRDPPAYIEEFLQ QYNHYKSNVRIFKLQPNKPSKELAEVLMFAQISHCYEPEYLSNF PQEVKDLLSCNHTVLDPLDRMTFCALILLRNKNLINPSSLLEL FFELFRCHDKLLRKTLYTHIVTDIKNINAKHKNNKVNVLQNF |

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|------------|--|--|---|
| | | | YTMRLDSNATAAKMSLDVMIELVRRNIWDAKTNVNITTACFSK VTKILVAALTFFLGKDEDEKQSDSESEDDGPTARDLLVQYATG KKSSKNKKLEKAMKVLKKHRKKKKPEVNFSAIHLIHDQDFA EKLLKQLECCKEFEVKMMLNLISRLVGIELFLFNFPFLQR FLQPHOREVTKILLFAAQASHHIVPPEIIQSLLMTVANNFVTDK NSGEVMTVGINAIKEITARCPLAMTEELLQDLAQYKTHKDKNVM MSARTLIHLFRTLNPQLQKKFRGKPTASIEARVQYEGELDAK DYIPGAELVEVEKEENAENDEDEGWESTSLSEEDADGEWIDVQH SSDEEQQRISKLNLMMPMEERKAKAAAIKSTSRVLTQEDFQKIRM AQMRKELDAAPGKSQKRKYIEIDSDSEPRGELLSLRDIERLHKK PKSDKETRLATAMAGKTDREKFEVRKTKTNPFSSSTNKEKKKQK NFMMMRYSQNVRSKNKRSFREKQLALRDALLKKKKRMM |
| 5506 | 1 | 1531 | FRGDLCCGQRGGSAPGEGGSSAWPAPAHFLPERERERELCPGRS CSGGGGETPGTTPVWSPLEGGGDEELRPNPVYRPPYRWAVVV LAAFPSLGAGGETPEAPPESWTQLWFFRFVNAAGYASFMVPGY LLVQYFRKNYLETGRLCFPLVKACVFNPKASDEVPLAPRT EAAETTPMWQALKLLFCATGLQVSYLTWGVQLQERVMTSRYGATA TSPGERFIDSQFLVLMNRVLALIVAGLSCVLCKQPRHGAHYRY SFASLSNVLSSWCQYEALEKFSVFPTQVLAKASKVIVMLMGKLV SRSYEHWEYLTATLISIGVSMFLLSGPEPRSSPATTLGLLIL LAGYIAPDSFTSNWQDALFAYKMSSVQMMFVNFSCFLTGVSL LEQGALLEBGRFMGRHSEFAHALLLSICSACGQLFIYFTIGQF GAAVFTIIMTLRQAFALLSCLLYGHTVTVVGGGLGVAVVFAALL LRVYARGRLKQRGKKAHPVESPVQKV |
| 5507 | 3704 | 1271 | PRGTRRCRPPAGRASRRARRRPPCPGPAAPGSLEIGGFGTAAGKK VAVADVQFGPMRFHQDQLQVLLVFTKEDNQCNGFCRACEKAGFK CTVTKEAQAVLACFLDKHHDIIIDHRNPRQLDABALCRSIRSS KLSENTVIVGVVRRVDREELSVMPFISAGFTRRYVENPNIMACY NELLQLEFGEVRSQKLRLACNSVFTALENSEDAIETISSEDRFIQ YANPAFETTMGYQSGLIGKELGEVPINEKKADLLDTINSICIRI GKEWQGIYYAKKNGDNIQQNVKIIPVIGQGGKIRHYVSIIRVC NGNNKAEKISECVQSDTHTDNQGTGKHKDRRKSGLDVKAVASRAT EVSSQRRHSSMARIHSMTEAPITKVINIINAAQESSMPMPVTEA LDRVLEILRTTELYSPQFGAKDDDPHANDLVGGMLSDGLRLLSG NEYVLSTKNTQMVSSNIITPISLDDVPPRIARAMENEEYWNFDI FELEAATHNRPLIYLGLKMFARFGICEFLHCSESTLRSWLQIIE ANYHSSNPYHNSTHSADVLHATAYFLSKERIKETLDPIDEVAAL LAATIIDVDHPGRTNSFLCNAGSELAIIYNDTAVLESHHAALAF QLTGDDKCNIFKNMERNDYRTLQGIIDMVLATEMTKHFEHVN KPVNSINKPLATLEENGETDKNQEVINTMLRTPENRTLIKRM LI KCADVSNPCRPLOYCIEWAARISEEYFSQTDDEEKQQGLPVVMPV FDRNTCSIPKSQISFIDYFITDMFDAWDAFVDLPDLMQHLDDNF KYWKGLDEMKLRLNLRPPPE |
| 5508 | 1151 | 691 | LSSVFSSRSASMFVAGCSMGPFLLHYWYLSLDRFPASGLRGFPW VLKKVLVDQLVASPLGVWYFLGLGCLGQTVGESQELREKFW EFKADWCWPAQAQFVNFLFVPPQFRVITYINGLTGLWDTYLSYL KYRSPVPLTPPGCVALDTRAD |
| 5509 | 1238 | 619 | RKSRGQCNALSASGPAAAAAAMVRKLKPFHEQKLLKQVDFLWNE VTDHNLHELRLVRLRRYRLQRREDYTRYNQLSRAVRELARLRDL P ERDQFRVRASAAALLDKLYALGLVPTRGSLCDEFVTASSFCRRR LPTVLKLRMAQHLQAQAVFVEQGHVRVGPVVDPAFLVTRSM EDFVTWVDSSKIKRHVLEYNEERDDFDLEA |
| 5510 | 96 | 1195 | PAGAHLSGSSSEPLVEFGRGRVGRVKGGERGLQASGSAPGRSKM AEGERQPPDSSSEAPPATQNFIIPKKEIHTVPMGKWKRSQAY ADYIGFIIITLNEGKVGKKLTFEYRVSEATIEKLVALNLNLTDRWID ETPPVVDQPSRFGNKAYRTWYAKLDEBAENLVATVPTHLAAAVP EVAVYLKESVGNSTRIDYGTGHEAAFAFLCCLCKIGVLRVDDQ IAIIVFKVFNRYLEVNRKLQKTYRMEPAGSQGVWGLDDFQFLPFI WSSQLIDHPYLEPRHFVDEKAVNENHKDYMFLECILFITEMKT GPFAEHSNQLWNISAVPSWSKVNQGLIRMYKAECKEKFVPIQHF KFGSLPIHPVTSG |

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|------------|--|--|---|
| 5511 | 276 | 1980 | KLSRVNLPPENLITSISAVPISQKEEVADFQLSVDSLLEKDNH HSRPDIQVQAKRLAEKLRCDTVVSEISTGQRTVNFKINRELLTK TVLQVQVIEDGSKYGLKSELSGLPQKKIVVEFSSPNVAKKPHVG HLRSTIIGNFIANLKEALGHQVIRINYLGDWGMQFGLLGTGFQL FGYEEKLQSNPLQLHFEVYVQVKEAADDKSVAKAAQEFFQRL LGDVQALSLWQKFRDLSEIYIRVYKRLGVYFDEYSGESFYREK SQEVLKLLSKGLLLKTKGTAVVDLSGNGDPSSICTVMRSDGT SLYATRDIAAIDRMDKYNFDTMIYVTDKGQKKHFQVQVFMKI MGYDWAERCQHVPPFVQGMKTRRGDVTFLVDLNEIQRLMLQN MASIKTTKELKNPQETAERVGLAALIIQDFKGLLLSDYKFSWDR VFQSRGDTGVFLQYTHARLHSLBETFGCGYLNDFNTACLOEPQS VSILQHLRLRFDEVLYKSSQDFQPRHIVSYLLTSLHLAAVAHKT QIKDSPPEVAGARLHLFKAVRSVLANGMKLLGITPVCRM |
| 5512 | 120 | 1015 | DPSSLTITVTGVTVLVLVLSKMSNRREPTIQDPEAKYPLPL IEKEKISHNTRRRFRGLPSDPHVLGLPVGNYVQLLAKIDNELVV RAYTPVSSDDDRGFVDLIKIYFKNVHPQYPEGGKMTQYLENMK IGETIFFRGPGRGLFYHGPGLGIRPDQTSPPKKTADHLGMIA GGTGITPMLQLIRHITKDPDRTRMSLI FANQTEEDILVRKELE EIAIRTHPDQFDLWYTLDRPPICWKYSSGFVTADMKEHLPPEAK STLILVCGPPPLIQTAAHPNLEKLGTYQDMIFTY |
| 5513 | 2 | 837 | ARWRLPSDSPRI PFAGATPGRGSCRNLYLPSSSPPEPSSFPSS PPTSRGGPGSRDTMSDSEESQDRQLKIVVLGDGASGKTSLTTC FAQETFGQYKQTIGLDFLRRTILPGNLNVTLQIWDIGGQTIG GKMLDKYIYGAQGVLLVYDITNYQSFENLEDWYTVVKVSESE TQPLVALVGNKIDLEHMRTIKPEKHLRFCEQNGFSSHFVSAKTG DSVFLCFQKVAEILGKLNKAEIEQSQRVVKADIVNYNQEPMS RTVNPSSSMCAVQ |
| 5514 | 1295 | 449 | VNRPSWIMGNFRGHALPGTFFFIIGLWNCSTSLKYICKKQKRT CYLGSKITLFYRLLEILRGITIVGMALTMAGEQFI PGGPHLMLYD YKQGHWNQLLGWHHFTMYFFFGLLGVADILCFTISSLPVSLTKL MLSNALFVEAFIFYNETHGREMLDIFVHQLLVLVVFLTGLVAF EFLVRNNVLELLRSSLILLQSSWFFQIGFVLYPPSGGPAWDL DHEILFLTICFCWHYAVTIVGMNYAFTIWLKSRRLKRLCSS EVGLLKNAEREQSESEEM |
| 5515 | 1572 | 260 | FVRLVGRGDCDPLLSVCLTMTPLYEGLSGGGEKTAVIDLGEAF TKCGFAGETGPRCIIPSVIKRAGMPKPVVRVQYNINTEELYSYL KEFIHILYFRHLLVNPRDRRVIIESVLCPSHFRETTLRVLFKY FEVPSVLLAPSHLMALLTLGINSAMVLDCCYRESLVLPYEGIP VLNCWGLPLGGKALHKELETQLLEQCTVDTVAKEQSLSVVG SVEFVLEDIKARTCFVSDLRGLKQAQAKFNIDGNRNPSPPP NVDYPLDGEKILHILGSIRDSVVEILFEQDNEEQSVATLILDSL IQCFIDTRKQLAENLVVIGTSMPLPGFLHRLAEIRYLVEKPKY KKALGTKTFRITPPAKANCVANLGGAI F GALQDILGSRSVSKE YYNQGTGRIPDWCSLNNPPLEMMFVVGKTQPLMKRAFSTK |
| 5516 | 3 | 735 | NSREPPQAGPGSPRKSPTASSFLFPWRPLASSFWMGAGQAES IKAMWRVPGTTRRPVTGESPGMHRPEAMLLLTALLGCPWTWAG KMYGPGGGKYFSTTEDYDHEITGLRVSVGLLVKSVQVKGDSW DVKLGLGGNTQEVTLQPGYITKVFAVQAFRLGMVMTSKDR YFYFGKLDGQISSAYPSQEGQVLVGIGYQYQLLGIKSGFEWNY PLEEPTTEPPVNLITYSANSFVGR |
| 5517 | 246 | 499 | SEIYVAMRTDSSKMTDVESGVANFASSARAGRRLALPDIOSSAA TDGTSDLPLKLEALS VKEDAKEKDKTTQDQLEKPKQNEEK |
| 5518 | 3 | 1375 | DAWADAWVRWDLNMDPCLWLGLLLPLVAALDFNYHREQGMEA FLKTVAQNYSSVTHLSIGKSVKGRNLWLVVGRFPKEHRIGIP EFKYVANMHGDETVGRELLHLIDYLVTS DGKDPEITNLINSTR IHIMPMPDGFPAVKKPCDYYSIGRENYNQYDLNRNPDABFY NNVSRQPETVAVMKWLKTETFFVLSANLHGGALVASYPFNGVQA TGALYSRSLTPDDDFVQYLAHTYASRNPNMKKGDECKNMNFEN GVTNGYSWYPLQGGMQDYNIIWAQCFEITLSCCKYPREKLP SFWNNNKASLIBYIKQVHLGVKGVVFDQNGNPLPNVIVEVQDRK |

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|------------|--|--|---|
| | | | HICPYRTNKYGEYLLLLPGSYIINVTVPGHDPHITKVIPEKS QNFSALKKDILLPFQGGQLDSIPVSNPSCPMIPLYRNLPDHSAT KPSLFLFLVSLHHIFFK |
| 5519 | 87 | 477 | IKSKLNQQQVEVQSEWRLEAKGPTMGKESGWDSGRAAVALVVG GVVAVGTVLVALSAMGFTSVGIAASSIAAKMMSTAAIANGGGVA AGSLVAILQSVGAACLSVTSKVIIGGFAGTALGAWLGSPSS |
| 5520 | 117 | 943 | PTEGRQKVLKTFVPRALAMTKTSTCIYHFLVLSWYTFLLNYI SQEGKDEVKPKILANGARKYMTLLNLLQTI FYGVTCCLDDVLK RTKGGKDIKFLTAFRDLLFTLAFPVSTFVFLAFWILFLYNRDL IYPKVLDTVIPVWLNHAMHTFIPITLAEVVLRLPHSVPSKKTGL TLLAAASIAIYISRLWLYFETGTWVYPVFAKLSLLGLAFAFSL YVFTASIIYLLGEKLNHWKQVSVQILQWRLESVGICFQWPDWKS PAKHQLVKNI |
| 5521 | 546 | 911 | KILNMOKSCSENEGKPNMPKAEEDRPLEDVQAEAGNPQPSEE GVSQAEAGNPRGPNQPGQGFKEDTPVRHLDPEEMIRGVDELER LREEIRVRNKFVMMHWKQHSRSPYPVCFRP |
| 5522 | 1224 | 637 | GSRLPQQRSEKMMWVFGYGLIWKVDFFPYQDKLVGYITNYSRRF WQGSTDHRGVPGKPGRVTLVLEDVAGCVWGVAYRLPVGKEEVK AYLDFREKGGYRTTTFIYFKDPTTKPFVLLYIGTCNDPDLG PAPLEDIAEQIFNAAGPSGRNTEYLFELANSIRNLVPEEADHL FALEKLVKERLEGGKQNLNCI |
| 5523 | 3 | 1280 | SKGKKRMGSSMSAATARRPVFDDKEDVNFDFHQLRAIGKGSFG KVCIVQKRDTEKMYAMKYMKNQCCIERDEVNRNPRELEILQIE HVLVNLWYSFQDEEDFMVVDLLGGDLRYHLQNNVQFSEDTV RLYICEMALALDYLRGQHI IHRDVKPDNILLDERGHAHLTDFNI ATIKDGERATALSGTKPYMAPEI FHSFVNGGTGYSEFVDWVS GVMAYELLRGWRPYDIHSSNAVESLVQLFSTVSQVYVPTWSKEM VALLRKLTLVNPETHRLSSLQDVQAAPALAGVLWDHLEKRVEPG FVPNKGRLHCDPTFELEEMILESRLHKKKKRLAKNKSRSRDSR SSQSENDYLODCLDAIQQDFVIFNREKLKRSQDLPREPLPAPES RDAEPVEDEAERSALPMCGPICPSAGSG |
| 5524 | 85 | 2318 | REPERDRHPGESSQGSAGGCFPSPTMELRCGGLLFSSRFDSG NLAHVEKVESLSDGEGVGGASALTSGIASSPDYEFNVWTRPD CABTEFENGNRSWFYFVVRGMPGKLTINIMNMNKSGLYSQG MAPFVRTLPTRPRWERIRDRPTFEMTETQFVLSFVHRFVEGRGA TTFFAFCYFFSYSDCQELLNQDLQRFENHPHTSSPLDTIYYHR ELLCYSLDGLRVDLLTITSCHGLREDREPRLEQLFPDTSRPRF RFAGKRIFFLSSRVHPGETPSSSFVNFGLDFILRPDDPRAQTLR RLFVFKLIPMLNPDGVVRGHYRTDSRGVNLNRQYLPDAVLHPA IYGAVALLYHHVHSRLNSQSSSEHQPSCLPPDAPVSDLEKAN NLQNEAQCGHSAHRHNAEAWKQTEPAEQXLSNVWIMPQOSAGLE ESAPDTIPPKESGVAYYVDLHGHASKRGCFMYGNSFSDESTQVE NMLYPKLISLNSAHFDFQGCNFSKNNYARDRRDQSKESGSRV AIYKASGIHSTYLECNNTGRSVNSIPAACHDNGRASPPPPPA FPSRYTVELFEQVGRAMAIAALDMAECNPWPRIVLSEHSSLTNL RAWMLKHVRNSRGLSSTLNVGVNKKRGLRTPPKSHNGLPVSCSE NTLRSRASFSTGTSAGGSSSSQNSPQMKNPSFPFHGSRPAGL PGLGSSSTQKVTHRVLGPVRGKPVWEPLQHVFGCLGHGCKG |
| 5525 | 105 | 834 | SNLDFERHLFMGQQISDQTLQVINKLPEKVAKHVTLVRESGS LTYEEFLGRVAELNDVTAKVASGQEKHLLFEVQPGSDSSAFWKV VVRVVC'KINKSSGIVEASRIMNLYQFIQLYKDI TSQAAGVLAQ SSTSEBPDENSSSVTSCQASLWGRVKQLTDEEECCICMDGRAD LILPCAHSFCQKCIDKWSDRHNCPIRLQMTGANESWVVS DAP TEDDMANYILNMADEAGQPHRP |
| 5526 | 3 | 853 | RRPCNPVRAAKRTGAARAPRGLEVTMLRVAWRTLSLIRTRAVT QVLVPLPGGGSAAKFPFNQWGLQPRSLLLQAARGYVVRKPAQSR LDDDPPTLLKDYQNVPGIEKVDDVVKRLSLEMANKKELKI KQEQFMKKIVANPEDTRSLERIALSVKIRSYEHHLEKHKRDK AHKRYLLMSIDORKKMLKNLNTNYDVFEKICWGLGIEYTFPPL YYRRAHRRFVTKKALCIRVFQETQKLKKRRRLKAAAAAQKQAK |

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|------------|--|--|--|
| 5527 | 3225 | 565 | RRNPDSPAKAIPKTLKDSQ LLRKVLLHQNPLLRHQPNRTCSFSATMKLKDTSRPFKQSSCG KFQTKGIVVGKWEVKIDPNMFADGQMDLVCFEELTDYQLVS PAKNPSSSLFSKEAFKRKAQAVSEEEEEEGKSSSPKKIKLKKS KNVATEGSTSQKEFEVKDPELEAQGDDMVCDDEAGEMTSNVLV QTAPKKKKKNGKKGLEPSQSTAAKVPKAKTWIPEVHDQKADVS AWKDLFVPRPVLRLSFLGFSAPTPIQALTLPAPAIRDKLDILGA AETGSGKTLAFAIFMIHVLQWQKRNAAPPPNTEAPPGETTE AGAETRSPGKAEASDALPDDTVIESEALPSDIAABARAKTGGT VSDQALLFGDDDAGEGSSSLIREKPVPKQNEEENLDKEQTGN LKQELDDKSATCKAYPKRPLGLVLTPRELAVQVKQHIDAVAR FTGKLTAILVGGMSTQKQORMLNRRPEIVVATPGRWLWELIKKKH YHLRNLRLRCLVVDADMVEKGHFAELSQLLEMLNDSQYNPK RQTLVFSATLTTLVHQAPARILHKKHTKKMDKTAKLDDLMOKTCM RGKPKVIDLTRNEATVETLTETKIHCEDEKDFYLYYFLMQYPG RSLVFANSISCIKRLSGLLKVLDIMPLTHACMHQKQLRLNLEQ FARLEDCVLLATDVAARGLDIPKVQVHIHYQVPRTSEIYVHRSG RTARATNGLSLMLIGBEDVINPKKIYKTLKKDEDIPLFPVQTK YMDVVKERIRLARQIEKSEYRNFOACLHNSWIEQAAAALEIELE EDMYKGGKADQGEERRRQKQMKVLKKELRHLLSQPLFTESQKTK YPTQSGKFPFLVSAFSGESALSCLSKQKKKKTKPKPQBPQBP QPSTSAN |
| 5528 | 3 | 895 | GPFLSACRMWGACKVKVHDSLATISITLRRYLRLGATMAKSKFE YVRDFEADDTCLAHCWVVRLDGRNFRFAEKHNFAPKPNDSRAL QLMTKCAQTVMELEDDIVIAVQGSDEYSFVFKRTNWFKRRASK FMTHVASQFASSYVIFYWRDYFEDQPLLYPPGFDGRVVVPSNQT LKDYLSWRQADCHINNLYNTVFWALIQQSGLTPVQAGRLQGT AADKNEILFSEFNINYNNEPPMYRKGTVLIWQKVDEVMTKEIKL PTMEGKKMAVTRTRTKPKPSHLPRAPCLRWL |
| 5529 | 48 | 640 | TFRLVSAHLKTRKLINFEAAERRWRDWSRQGWLSVKMQRVSG LSWTLRSVLWLSGLSEPGAARQPRIMEEKALEVYDLTIRTDPE KNTLELEEVVSESCVEVQEIINEEYLVIIIRPTPTVPHCSLATL IGLCRLVKLQRCPLPFKHKLEIYISEGTHSTEDINKQINDKERV AAMENPNLREIVEQCVPLEPD |
| 5530 | 4541 | 2606 | AQIVHAISYCHKLHVGHRLDKPENVVFFEKQGLVKLTDFGFSNK FQPGKLLTSCGSLAYSAPAILLGDEYDAPAVDIWSLGVILFML VCGOPPFQEAANDSETLTMIMDCKYTVPSHVSKCKDLITRMLQR DEKRRASLEEIEHNHPWLQGVDPSPATKYNIPLVSYKNLSEEHN SIIQRMVLGDIADRDALVEALETNRYNHITATYFLAERILREK QEKEIQTRSASPSNIKAQFRQSWPTKIDVPQDLEDDLTATPLSH ATVPQSAPARAADSVLNGHRSKGLCDSAKKDDLPELAGPALSTVP PASLKPTASGRKCLFRVEEDDEEDDEEDKKPMSLSTQVVLRRKPS VTNRLTSRKSAPVLNQIFEEGESDDEFMDENLPPKLSRLKMNI ASPGTVHKRYHRRKSQGRGSSCSSSETSDDDSESRRRLDKDSGF TYSWHRRDSSEGGPGSEGDDGGQS KPSNASGGVDKASPSENNAG GGSPSSGGGNPTNTSGTTRRCAGPSNSMQLASRSAGELVESLK LMSLCLGSLHGSTKYIIDPQNGLSFSSVKVQEKSTWKMCSST GNAGQVPAVGGIKFFSDHMDTTTELRIKSKNLKNNVLQPLPLC EKTISVNIQRNKEGELLCASSPASCHVI |
| 5531 | 24 | 515 | GSOPRAPRPRDSMERPEPELIQSWRAVSRSPLEHGTVLFARLF ALEPDLPLFLQYNCRFSSPEDCLSSPEFLDHIRKVMVLVIDAAV TNVEDLSSELEYLASLGRKHRAVGKLSFSTVGSLLYMLEKC LGPAFTPATRAAWSQLYGAVVQAMSRGWGE |
| 5532 | 3395 | 1402 | SDWMVVGKRMIIEDTEFCGEELLHSVLQCKSVFVDLGDGEEMR RARTRAMPYEMIRGVFFLNRAAMKMANMDFVDFRMTNPRDSYG KPLVKDREAELLYFADVCAGPGGFSEYVLRKKWHAKGFGMTLK GPNDFKLEDFYSASSELFEPPYEGGIDGDDITRPENISAFRN FVLDNTDRKGVHFLMADGGFVSEGEENLQELSKQLLLCQFLMA LSIVRTGGHFICKTFDLFTPFVGLVYLLYCCFERVCLFKPITS RPANSERYVCKGLKVGIDDDVRDYLFAVNIKLNQLRNTDSDVNL |

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|------------|--|--|---|
| | | | VVPLEVIKGDHEFTDYMIRSNESHCSLQIKALAKIHAFVQDITLSEPRQAEIRKECLRLWGIPOQARVAPSSSDPKSKFFELIQGTEIDIPSYKPTLLTSKLEKIRPVFDYRCMVSGSEQKFLIGLKSQIYTWDGRQSDRWIKLDLKTLPDRTLLSVEIVHELKGGKAQRKISAIHILDVLVLNGTDVREOHFNORIQLAEKFKVAVSKPSRPDMNPIRVKEVYRLEEMEKIFVRLEMKIKGSSGTPKLSYTGDRDRHFVPMGLYIVRTVNEPWTMGFSKSPKKKFFYNKTKDSTFDLPADSIAFPFHICYGRLEFWEWGDGIRVHDSQKPDQDKLSKEDVLSFIQMHRA |
| 5533 | 94 | 789 | MKERRAPQPVVARCKLVLVGDVQCGKTAMLVLAQDCYPETYVPTVFENYACLETEEQRVLSLWDTSGSPYYDNVRPLCYSDSDAVLLCFDISRPETVDSALKKWRTEILDYCPSTRVLLIGCKTDLRTDLSTLMELSHQKQAPISYEQGCAIAKQLGPEIYLEGSAFTSEKSIHSIFRTASMLCLNKPSPLPQKSPVRSLSKRLHLPSRSELSIPTFKKEKAKKCSIM |
| 5534 | 3 | 605 | LVRGRARAANPGRVGMGLRQVRVEHFLEQRNLVTEVLGALEAKTGVEKRYLAAGAVTLLSLYLLFGYGASLLCNLIGFVYPAYASIKAIESPCKDDDTVWLTWVWYALEGLAEFFSDLLLSWFFPYVVGKCAPLLFCMAPRPWNGALMLYQRVVRPLFLRHHGAVDRIIMNDLSGRALDAAAGITRNVPKSPQTPQPKDK |
| 5535 | 1029 | 332 | KSFMDSEARLCSLVELSDTQDETQKSDSENEEDLKIDCLOBSQELNLQKLKNSERILTEAKQKMRBLTVNIMKEDLIKELIKTGNDAKSVSKQYTLKVTLEHDAEQAKVELTETQKQLQELNKLSDVAMKVKLQKEFRKKVDAAKLRVQVLQKKQDQSKKLASLSIQNEKRANELEQSVDHMKYQKIQLQKQLQENEKRLQDLDAVIKRDQOKIKVILSYIPAKYNMCK |
| 5536 | 942 | 282 | AAATAASLSPRGCLRLTPSSSDVSFSRAPPPSAAPLPTGRAQMSPSGRCLCLLTIVGLILPTRGQTLKDTTSSSSADATIMDIQVPTRAPDAVYTELOPSTPPTWPADETPQFQQTQQLQEGTDGPLVTDPETHKSTKAAHPTDDTTTLSEKSPSTDVQTDPTLKPSPGFHEDDPFFYDEHTLRKRGLLVAAVLFTGIIILTSKCRQLSRLCRNHCR |
| 5537 | 3 | 2391 | RARVSSPOLRVFRSGRPRRLRVLRINRTSVALRLAGTGRFVAKTPGHGPGWEMGLLTFRDVAVEFSLEWEHLEPAQKNLYQDVMLENYRNLVSLGLVSKPDLITFLEQRKEPWNVKSEETVAIQPDVFSHYNKDLLTEHCTEASFQKVISRRHGSCLLENLHLRKRWKRECEGHNGCYDEKTFKYDQFDESSVESLFHQQLLSSCAKSYNPDQYRKYFTHSSLLNQQEEDIWGKHIIYDKTSVLFQVSTLNSYRNVFIEKNYHCNNSEKTLNQSSSPKNHQENYFLEKQYKCKEF3EVFLQSMHQEQEQEQSYKCNKCEVEVCTQSLKHIIHQOTIHIRENSYSYNYDKDLSQSSNLRKQIIHNEEKPKYKCEKCGDSLNSHLHLTQHQTIPTEEKPKWKKECGKVFNLNCSLYLTQQQQIDTGENLYKCKACSKSFTRSSNLIVHQRIHTGEKPKYKCEKCGKAFRCSSYLTKHKRIHTGEKPKYKCEKCGKAFNRSSCLTQHQTTHTGEXLYCKVCCKSYARSNLIMHQRVHTGEKPKYKCEKCGKVFSSCLTQHRKIHTGENLYKCKVCAKPFCTCFNSLIVHERIHTGEKPKYKCEKCGKAFYSSHLIRHRIHTGEKPKYKCKACSKSFSDSSGLTVHRRHTGEKPYTCKECGKAFYSYSSDVIQHRRHTGQRPKYKCEKCGKAFNRSYLTTHQRSHTGERPKYKCEKCGKAFNRSYLTTHRRHTGERPKYKCEKCGKAFNRSYLTTHRRSHGERPKYKCEKCGKAFNRSYLIHQRSHTREKL |
| 5538 | 926 | 161 | HSMMPKIPWGSIPVLMLLLLGLLIDISQAQLSCTGPPAIPGPIPGIPGTGPDGQPGTPIKGEKGLPGLAGDHGEFGEKGDPIGPNPGKVGPGKPMGPKGGPGAPGAPGKGESGDYKATQKIAFSATRTINVPLRRDQTIREFDHVITNMNNNYEPRSGKFTCKVPLGYFTYHASSRGNLCVNLMRGRERAQKVVTFCDYAYNTFQVTTGGMVLKLEQGENVFLQATDKNSLLGMEGANSIFSGFLLFPDMEA |
| 5539 | 38 | 1258 | HRGPGSAAAPGCALPRGQALEGPRSCRPPQPMARRYDELPHYPIVDGPAALASFFETVPAVPGPYGPHRPPQLPPGLDSGLKREKDEIYGHPLFPLALVFEKCELATCSPRDGAGAGLGTTPGGDVCSSDSFNEDIAAFKQVRSERPLFSSNPELDNLVIQAIQVLRFHLL |

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|------------|--|--|---|
| | | | ELKVDHLCDFCHRYITCLKGMPTDLVIEDRDGGCREDFEDY PASCPSLPDQNNMWIRDHEDSGSVHLGTPGPSSGGLASQSGDNS SDQGDGLDTSVASPSSGGEDELDQERRRNKRGIFPKVATNIM RAWLFQHLSHYPSEEQKKQLAQDTGLTILQVNNWFINARRRIV QPMIDQSNRTGQGAASFPEGQPIGGYTETQPHVAVRPPGSGVMS LNLEGEWHYL |
| 5540 | 148 | 1440 | PPLGAGAGVHARSPHPARRLPPLTTAGVGGRAPDLLPTPWRQHRG PSGAAAPGCALPRGQALEGPRSCRPPQMARRYDELPHYPGIVD GPAALASFPETVPAVPGPYGPHRPPQLPPLGLDSDGLKREKDEI YGHPLFPLLLALVFEKCELATCSPRDGAGAGLGTTPGGDVCSSTS FNEDNTAFKQVRSEKPLFSSNPELDNLMIAIQVLRFHLLLELE KGMPTDLVIEDRDGGCREDFEDYPASCPSLPDQNNMWIRDHED SGSVHLGTPGPSSGGLASQSGDNSDQGVGLDTSVASPSSGGEDE ELDQEPRRNKKRGIFPKVATNIMRAWLFQHLSHYPSEEQKKQL LAQDTGLTILQVNNWFINARRRIVQPMIDQSNRTGQGAASFPEG QPIGGYTETEPHVAFRAPASVGDEFGRKEEWHYL |
| 5541 | 148 | 1440 | PPLGAGAGVHARSPHPARRLPPLTTAGVGGRAPDLLPTPWRQHRG PSGAAAPGCALPRGQALEGPRSCRPPQMARRYDELPHYPGIVD GPAALASFPETVPAVPGPYGPHRPPQLPPLGLDSDGLKREKDEI YGHPLFPLLLALVFEKCELATCSPRDGAGAGLGTTPGGDVCSSTS FNEDNTAFKQVRSEKPLFSSNPELDNLMIAIQVLRFHLLLELE KGMPTDLVIEDRDGGCREDFEDYPASCPSLPDQNNMWIRDHED SGSVHLGTPGPSSGGLASQSGDNSDQGVGLDTSVASPSSGGEDE ELDQEPRRNKKRGIFPKVATNIMRAWLFQHLSHYPSEEQKKQL LAQDTGLTILQVNNWFINARRRIVQPMIDQSNRTGQGAASFPEG QPIGGYTETEPHVAFRAPASVGDEFGRKEEWHYL |
| 5542 | 148 | 1440 | PPLGAGAGVHARSPHPARRLPPLTTAGVGGRAPDLLPTPWRQHRG PSGAAAPGCALPRGQALEGPRSCRPPQMARRYDELPHYPGIVD GPAALASFPETVPAVPGPYGPHRPPQLPPLGLDSDGLKREKDEI YGHPLFPLLLALVFEKCELATCSPRDGAGAGLGTTPGGDVCSSTS FNEDNTAFKQVRSEKPLFSSNPELDNLMIAIQVLRFHLLLELE KGMPTDLVIEDRDGGCREDFEDYPASCPSLPDQNNMWIRDHED SGSVHLGTPGPSSGGLASQSGDNSDQGVGLDTSVASPSSGGEDE ELDQEPRRNKKRGIFPKVATNIMRAWLFQHLSHYPSEEQKKQL LAQDTGLTILQVNNWFINARRRIVQPMIDQSNRTGQGAASFPEG QPIGGYTETEPHVAFRAPASVGDEFGRKEEWHYL |
| 5543 | 2405 | 665 | RWVREQWPPLRTSEAVKTPALRPFPGPRGVSPFPKPDWGKSPAP KRPFSDSGAFWSPERRPGVLEAPRRRPVPASFRVPPKPTRVHG SSASDRVLARTMIVADSECRALKDYLRFAFGGVGDSGPGEEQ RESRRARRGPGPSAFIPVEEVLREGAESLEQHLGLEALMSSGRV DNLAVMGLHPDYFTSFWRHLHYLLHTDGLASSWRHYIAIMAA ARHQCSYLVGSHMAEFLQTGGDPEWLLGLHRAPEKRLKLSINK LLAHRPWLITKEHTQALLKTGEHTWSLAELIQALVLLTHCHSL SFVFGCGILPEGDADGSPAPQAPTTPSEQSSPPSRDPLNNSGGF ESARDVEALMERMQQLQESLLRDEGTSQEEMESRFELEKSESL VTPSADILEPSHPDMLCFVEDPTFGYEDFTRRGAQAPPTFRAQ DYTWEDHGYSLIQRLYPEGGQLLDEKFOAAYSLTYNTIAMHSGV DTSVLRRAIWNYYIHCVFGRYDDYDGEVNNQLLERNLKVYIKTV ACYPEKTTARMYNLFWRHFRHSEKVIIVNLLLEARMQAALLYAL RAITRYMT |
| 5544 | 1895 | 514 | LGGLLGRQRLLLRMGAGRLGAPMERHGRASATSVSSAGEQAAGD PEGRRQEPLRRRASSASVPAVGASAECTRRDRLGSYSGPTSVSR QRVBSLRKKRPLFPWFGLDIGGTLVKLVYFEPKDIATAEERRE ESLKSIRKYLTSNVAYGSTGIRDVHLELKDILTLCGRKGNLHFI RFPTHDMPAFIQMRDKNFSSLLHTVFCATGGGAYKFEQDFLTIGD LQLCKLDELDCIKGILYIDSVGFNGRSQCYYFENPADSEKQK LPFDLKNPYPLLLVNIIGSGVSLAVYSKDNKRVGTSLGGGTF FGLCCLLTGCTTFEEALEMASRGDSTKVDKLVDRDIYGGDYBRFG LPGWAVASSFGNMMSKEKREAVSKEDLARATLITITNIGSIAR MCALNENINQVVFVGNFLRINTIAMRLAYALDYWSKGQLKALF SEHEGYFGAVGALLELLKIP |

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|------------|--|--|---|
| 5545 | 802 | 131 | GAMWSAGRGGAAPVLLGLLLALLVPCGGAAKTGAELVTCGSLV KLLNTHHRVRLHSHDIKYGSGSGQQSVTGVEASDDANSYWRIRG GSEGGCPRGSPVRCGQAVRLTHVLTGKNLHTHHFSPLSNNQEV SAFGEDGEGDDLWLTVRCSGQHWEREAAVRFQHVGTSVFLSVT GBQYGGSPIRGQHEVHGMP SANTHNTWKAMEGFIKPSVEPSAGH DEL |
| 5546 | 1592 | 146 | FVPRGGHSSMGQSGRSRHHQKRARAQAQLRNLEAYANPHSFVFT RGCTGRNIRQLSLDVRVMEPLTASRLQVRKKNLSLKDCAVAVAGP LGVTHFLILSKTETNVYFKLMRLPGGPTLTTFQVKKYSLVDRDVS SLRRHRMHQQFAHPPLLVLSNFGPHGMHVKLMTMFQNLFPISI NVHKVNLNTIKRCLLDYNPDSQELDFRHSYIKVVPVGASRGMK KLLQEKFPNMSRLQDISSELLATGAGLSESEAEPPGDHNI TELPQ AVAGRGNMRAQQSAVRLTEIGPRMTLQLIKVQEGVGEKVMFHS FVSKTEELQAILAEAKEKKLRKAQQAQQAQNVQRKQEQREAH RKKSLGEMKKARVGGSDDEASGIPSR TASLELGEDDDEQEDDDI EYFCQAVGEAPSEDLFPEAKQKRLAKSPGRKRKRWEMDRGRGRL CDQKFPKTKDKSQGAQARRGPRGASRDGGRGRGRGRPGKRV |
| 5547 | 1592 | 146 | FVPRGGHSSMGQSGRSRHHQKRARAQAQLRNLEAYANPHSFVFT RGCTGRNIRQLSLDVRVMEPLTASRLQVRKKNLSLKDCAVAVAGP LGVTHFLILSKTETNVYFKLMRLPGGPTLTTFQVKKYSLVDRDVS SLRRHRMHQQFAHPPLLVLSNFGPHGMHVKLMTMFQNLFPISI NVHKVNLNTIKRCLLDYNPDSQELDFRHSYIKVVPVGASRGMK KLLQEKFPNMSRLQDISSELLATGAGLSESEAEPPGDHNI TELPQ AVAGRGNMRAQQSAVRLTEIGPRMTLQLIKVQEGVGEKVMFHS FVSKTEELQAILAEAKEKKLRKAQQAQQAQNVQRKQEQREAH RKKSLGEMKKARVGGSDDEASGIPSR TASLELGEDDDEQEDDDI EYFCQAVGEAPSEDLFPEAKQKRLAKSPGRKRKRWEMDRGRGRL CDQKFPKTKDKSQGAQARRGPRGASRDGGRGRGRGRPGKRV |
| 5548 | 1 | 2153 | DQGGPPETIAFTFPRSTMEPLCLLLVGFSLPLARALRGNETTA DSNETTTTSGPPDPGASQPLLAWLLPLLLLLLLVLLAAYFFRF RKQRKAVVSTSDKKMPNGILBEQEQQRVMLLSRSPSGPKKYFPI PVEHLEEEIRIRSADDCKQFREEFNSLPSGHIQGT FELANKEEN REKNRYPNILPNDHSRVILSQLDGI PCSDYINASYIDGYEKENK FIAAQGPQKETVNDFWRMVWEQKSATIVMLTNLKERKEBKCHQY WPDQGCWYGNIRVVEDCVLVDEYTRKFCIQPQLPDGCKAPR LVSQHLFTSWPDPFGVPFTPIGMLKFLKKVKTLPVHAGPIVHV SAGVGRGTGTFVIDAMMAMMAEQKVDVFEFVSRI RNQRPMQV TDMQYTFIYQALLEYYLYGDTL DVSSLEKHLQTMHGTTHTFDK IGLEEEFRKLTNVRIMKENMRTGNLPANMKKARV IQIIPYDFNR VILSMKRQGEYTDYINASFIDGYRQKDYFIATQGPLAHTVEDFW RMIWEWKSHTIVMLTEVQBEREQDKCYQYWPTEGVS THGEITIEI KNDTLSEAISIRD FLVTLNQPARQBEQVRVVRQFHFHGWPEIG IPAEKGGMIDLIAAVQKQQQTGNHPITVHCSAGAGRTGTFIAL SNILERVKAEGLLDVFPQAVKSLRLQRP HMVQTLEQYEFYKVVQ DFIDIFSDYANFK |
| 5549 | 915 | 256 | FEATGGKRLAFKMGATARHREMAIOAKKKLTATDPIERLRLQ CLARGSAGIKGLGRVFRIMDDNNR TLDFKEFMKGLNDYAVVME KEEVEELFQRFDKDGNGTIDFNEFLT LRPPMSRARKEVIMQAF RKLDKTGDGVITIEDLREVYNAKHHPKYQNGEWSSEQVFRKFLD NFDSPYDKDGLVTPPEEFMNYAGVSAS IDTDVYFIIMMRTAWKL |
| 5550 | 2364 | 1210 | RKRKVFLLKMRRLNRKLTSLVKELDAFPKVPESYVETSASGGTV SLIAFTTMALLTIMEFSVYQDTWMKYEYEVDKDFSSKLINIDI TVAMKQYVVGADVLDAETMVASADGLVYEPTVFDLSPQQKEWQ RMLQLIQSRLQEEHSLQDVIFKSAFKSTSTALPPREDDSSQSPN ACRIHGHLYVNKVAGNFHITVGKAI PHPRGHAAHLAALVNHSYN TSHRIDHLSFGELVPAIINPLDGT EKIAIDHNQMFQYFTTVVPT KLHTYKISADTHQFSVTERERIINHAAGSHGVSGIFMKYDLSSL MVTVTBEHMPFWQFFVRLCGIVGGIPSTTGMLHIGKFTVBIIC CRFRLGSYKPVNSVPFEDGHTDNHLPLENNTH |
| 5551 | 211 | 1700 | MQRDHTMDYKESCPVSISIPSSDEHREKKKRFTVYKVLVS VGRSE |

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|------------|--|--|--|
| | | | WVFVFRYAEDFKLYNTLKKQFPAMALKIPAKRIFGDNFDPDFIK QRRAGINEFIQNLVRYPELYNHPDVRAFLQMDSPKHQSDPSEDE DERSSQKLHSTSQNINLGPSPGNPHAKPTDFDLKVIKGSFGKV LLAKRKLKDGKFYAVKVLQKKIVLNRKEQKHIMAERNVLLKNVKH PFLVGLHYSFQTTEKLYFVLDFVNGGELFFHLQRESEFPEHRAR FYAAEIASALGYLHSIKIVYRDLKPENILLDSVGHVVLTDGFLC KEGIAISDTTTFCTPEYLAPEVIRKQPYDNTVDWVCLGAVLY EMLYGLPPFYCRDVARMYDNI LHKPLSLRPGVSLTAWISILELL EKDRQNRLGAKEDFLEIQNHFFESLSWADLVQKKIPPPFNPV AGPDDIRNFDATFTEETVPYSVCVSSDYSTVNASVLEADDAFVG FSYAPPSEDLFL |
| 5552 | 2748 | 930 | LGPAAGAAAMGKKKKHKAERSSYEDYADKPLEKPLKLVKVG SEVTELSGGSHDSSYYDDRSHERERHKEKKKKKKKSEKEKHL DDEERRKRKEKKREREREHCDTGEADDDFDGGKKEVEPPDR PVACRTQPAENESTPIQQLLEHFLRQLQRKOPHGFAPFVTD A IAPGYSMI IKHPMDFGTMKDKIVANEYKSVTEFKADFKLMCDNA MTYNRPDVTYYKLAKKILHAGFKMMSKQAALLGNEDTAVEEPV EVVPVQVETAKKSKKPSREVISCMFEPEGNACSLTDSABEHVL ALVEHADEARDRINRFLPGGKMGYLLKRNKGDSLLYSVVNTAEP DAEDEETHPVDLSSLSKLLPGFTTLGFKDERRNKVTFLSSATT ALSMQNNSVFGDLKSDMEMLLYSAYGETGVQCALSLEQEFVKDA GSYSKKVVDLLDQITGGDHSTLFLQLKQRRNVPMKPPDEAKVG DTLGDDSSSVLEFMSMKSYDVSVDISMLSSLGKVKKBLDPPDS HLNLDDETTKLLQDLHEAQAERGSRPSSNLSLSNASERDQHHL GSPRLSVGEQPDVTHDPYEFLOSPEPAASAKT |
| 5553 | 74 | 1095 | LGREAVYLVSRMDGPVAEHAQEPFHVVTPLLESWALSQVAGMP VFLLCENVPSSGFKIRIGHFQCEMAKKGCRHLVCSGGNAGI AAAYAARKLGIPATIVLPSTSLQVQRLQGEAGAEVQLTGKVD EANLRAQELAKRDGWNVPFDHPLIWKGHASLVQELKAVLRTP PGALVLA VGGGGLLAGVAGLLEVQWQHVPITAMETHGAHCFA AITAGKLVTLPDITSVAKSLGAKTVAARALECMQVCKIHSEVVE DTEAVSAVQQLLDDERMLVEPACGAALAAIYSGLLRRLQABGCL PPSLTSVVVIVCGGNNINSRELQALKTHLQGV |
| 5554 | 166 | 2318 | CSGRTGGRGSLRPAENVCLTCKLSGAETRGLLCPALRTWIMKVL GRSFFWVLPFVLPWAVQAVEHEEVAQRVILKLRGRGVAAMQSRQ WVRDSCRKLSGLLRQKNAVLNKLKTAIGAVEKDVLSDDEKLFQ VHTFEIFQKELNESENSVFQAVYGLQALQGDYKDVMNMKSSR QRLEALREAAIKEETEYMELLAARKHQVEALKNMQHONQSL SML DEILEDVRKAADRLLEEIEEHAFDDNKSVMKGVNFVAVLRVEEIE ANSKQNTKREVEDDLGLSMLIDSQNNQYILTKPRDSTIPRADH HFIKDIVTIGMLSLPCGWLCTAIGLPTMFGYIICGVLLGPGSLN SIKSIVQVETLGEFGVFFTLFLVGLFSPKLRKVMKISLQGP C YMTLLMIAFGLLWGHLLRIKPTQSVFISTCLSSTPLVSRFLM GSARGDKEGDIDYSTVLLGMLVTQDVQLGLEMAVMPTLIQAGAS ASSSIVVEVLRILVLIGQILFSLAAVFLCLVIKKYLIGPYRK LHMEKGNKEILILGISAFIFLMLTVTELLDVSMELGCFLAGAL VSSQGPVVTEIATSIPIRDFLAIVFFASIGLHVFPFTFVAYEL TVLVFLTLSSVVMKFLAALVLSLILPRSSQYIKWIVSAGLAQV SEFSFVLGSRARRAGVISREYVLLLSVTTLSLLLAPVLWRAAI TRCVPRPERRSSL |
| 5555 | 212 | 1425 | LSLRTRETPAPPRCEAASQGRVGRADAAAEAVRSVWNTRDR GTMAPQNLSTFCLLLLYLIGAVIAGRDFYKILGVPSASIKDKI KAYRKLALQLHPDRNPDDFQAQEKFDLGAAYEVLSDSEKRRQY DTYGEBGLKDGHQSSHGDI FSHFFGDFGFMFGGTFRQQDRNI PR GSDIIVDLEVTLEEVYAGNFVEVVRNKPVARQAPGKRKCNCROE MRTTQLGPGRFQMTQEVGCECPNVKLUNEERTLEVEIEPGVRD GMEYPIGEGEPHVDGEPGDLRFRIKVVVKHPIFERRGDDLYTNV TISLVESLVGFEMDITHLDGKVKHISRDKITRPGAKLWKKGEGL PNFDNNIKGSLIITFDVDFPKEQLTEEAREGIKQLLKQGSQVK VYNGLQGY |
| 5556 | 5835 | 3346 | RTRGMSKNCVPMEEFREYLLRMFQGTFFYLLQKITKDNNHAHTVKS R |

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|------------|--|--|---|
| | | | LEELDESYTEKFTDFLRLEFVSVHLRRIESYSQFPVVEFLTLEFK YTFHQPTHEGYFSCLDIWTFLDVLTSKIKSRLGDKEAVLNRYE DALVLLLTLEVLNRIQFRYNQAQLEELDDDETLDQDQTEWQRYLR QSLEVVAKVMELLPTAFSTLFPVLQDNLEVYLGQQFIVTSGS GHRNLNITAENDCRRHLHCSLRDLSSLLQAVGRLAEIFIGDVFAR FNDALTTVVERLVKVTLYGSGIKLYNIETAVPSVLKPDLDVHAQ SLAALQAYSHWLAQYCSEVHRQNTQQFVTLISTTMDAITPLIST KVQDKLLLSACHLLVSLATTVRPVFLISIPAVQKVFNRITDASA LRLVDKAQVLCRALSNIILLPWPENLPENEQQWPVRSINHASLI SALSRDYRNLPKSAVAPQKMPDLDDTKLIHQTLVLELDIVENI SGESTKSRQICYQSLQESVQVSLALFPAPIHQSDVTDEMLSFLL TLFRLGRVQMGVPFTEQIIQTFLNMFTRQLAESILHEGSTGCR VVEKFLKILQVVQEPGQVFKPFLPSIIALCMEQVYPIIAERPS PDVKAELFELLFRTLHNNWRYFFKSTVLASVQRGIAEEQMNENP QFSAIMQAFGQSFLQPDHILFKQNLFYLETNTKQKLYHKKIFR TAMLFQFVNVLQVLVHKSHDLLQEEIGIAIYNMASVDFDGFFA AFLPEFLTS CDGVDANQKSVLGRNFKMDRVRRERGRAKRAEWA RKPGTCAARRGHTIASGRGLCPPCSLAAAHMPADLVL |
| 5557 | 1712 | 491 | VILGAGLRDKDMWIPVVGLPRLRLSALAGACRFCLGSEAAATR KHLPARNHCGLSDDSPQLWPEPDFRNPERRKASKASLDFKRYVTD RRLAETLAQIYLGKPSRPPHLLLECNPGPGIILTQALLEAGAKVP ALESDDKTFIPHLESGLKNDGKLRVHCDFFKLDPRSGGVIKPP AMSSRGLFKNLGIEAVPWTADIPKVVGMFPPSRGEKRALWKLAY DLYSCTSIYKFGRIEVMNMFIGEKEFQKLMADPGNPDLYHVLSVI WQLACEIKVLHMEFWSSFDIYTRKGPLNPKRRELLDQLQKLY LIQMI PRQNLFTKNLTPMNYNIPFHLKHCFGRRSATVIDHLRS LTPLDARDILMQIGKQDEKVVNMHPQDFKTLFETIERSKDCAY KWLIDEETLEDR |
| 5558 | 1509 | 96 | RAGCTHPQVPADLGAPAEPRRPQKTCVCLLPQPGGQRGPTTMI TGVSFMRWTPVGVLTSLAYCLHQRVALAEQADGQCPVDRS LLKLMVQVVFRRGARSPLKPLPLEEQVEWNPQLLEVPPQTQFD YTVTNLAGGPKPYSPYDSQYHETTLKGMFAGQLTKVGMQMFAL GERLRKNYVEDIPFLSPFTFNPQEVFIRSTNIFRNLESTRCLLA GLFQCQKEGPITIIHTDEADSEVLVYPNYQSCWSLRQTRGRQTA SLQPGISEDLKKVKDRMGIDSSDKVDFFILLDNVAEQAHNLPSP CPMKLRPFARMIEQRAVDTSILYILPKEDRESLQMAVGPFLLHLES NLLKAMDSATAPDKIRKLYLYAAHDVTFTPLIMTLGTEDHKWPP FAVDLTMELYQHLESKEWFVQLYYHGKEQVPRGCPDGLCLPLDMF LNAMSVVTLSPKXVHALCSQTQVMEVGNEE |
| 5559 | 150 | 1983 | PLAATAHFAKMSRVAKYRRQVSEDPDIDSLETLSPPEMEELEK ELDVVDPDGSPVPGLRQRNQTEKQSTGVYNREAMLNFCETKK LMQREMSMDESQKVETKTDANKGEERGRDASKKALGPRRDSDLG KEPKRGGLKKSFSRDRDEAGGKSSEKPKKEEKIIRGIDKGRVRAA VDKKEAGKDGREERAVATKKEEEKKGS DRNTGLSRDKDKKREE MKEVAKKEDDEKVKGERRNTDTRKEGKMKRAGGNTDMKKEDEK VKRGTGNTDTKKDDEKVKNEPLHEKEAKDDSKTKTPEKQTPSG PTKPSEGPAPKVEEAAAPSIFDEPLERVKNNDPEMTEVNVNNSDC ITNEILVRFTALEFNTVVKLFALANTRADHVAFAIAMLKAN KTITSLNLDNSHITGKILAI FRALLQNNTLTLELRFHNRHICG GKTEMEIAKLLKENTTLLKLGYPHFLAGPRMTVTNLSRNMDKQ RQKRLQQRQAQEAKEKKDLLEVPAKAVAKGSPKPSPPSPK PPKNSPKKGGAPAAPPPPPPLAPPLIMENLKNLSLPATQRKM GDKVLPQAEKNSRDQLLAAIRSSNLKQLKKVEVPKLLQ |
| 5560 | 9 | 921 | SSVVEFSALSVSMACLSPSQLQKFPQDGFVLVLEGFLSAEECVAM QQRIGEIVABMDVPLHCRTEFTQEEQLRAQGSTDYFLSSGDK IRFFFEKGVFDEKGNFLVPPPEKSINKIGHALHAHDPVFKSITHS FKVQTLARSLGLQMPVVQSMYIFKQPHFGGEVSPHQDASFLYT EPLGRVLGVWIAVEDATLENGCLWFIPGSHTSGVSRMRVAPVG SAPGTSFLGSEPARDNSLFFVTPVQRGALVLIHGEVHVHKSQNL SDRSRQAYTFHLMESGTTWSPENWLQPTABLPFPQLYT |
| 5561 | 2175 | 1775 | CYFIFQFFSSPYPLHFFHQTAPLENPNGLYPFVMSPPGQPPQ |

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|------------|--|--|--|
| | | | QLLAPTYFSAPGVMNFGNPSYPYAPGALFP PPPPHLYPNTQAPS QVYGGVTVYNPAQQQVQPKPSPPRRTPQPVTKPPPFVVSRRGS S |
| 5562 | 342 | 1385 | SSGKNDMAAAGAAGLVRLKAGVLSQADYLNVLVQCETLEDLKLH LQSTDYGNFLANEASPLTVSVIDDRLEKEMVVEFRHMRNHAYEP LASFLDFITYSYMIDNVILLITGTLHQRSIAELVPKCHPLGSFE QMEAVNIAQTPAELYNAILVDTPLAFFQDCISEQDLDEMNIET IRNTLYKAYLESFYKFTLLGGTTADAMCPILFEADRRRAFIIT INSFGTELSKEDRAKLFPHCGRLYPEGLAQLARADDYEQVKNVA DYYPEYKLLFEGAGSNPGDKTLEDRLFEEHVKLNKLAFLNQFHF GVFYAFVKLKEQECCRNIVWIAECIAQRHRAKIDNYIPIF |
| 5563 | 342 | 1385 | SSGKNDMAAAGAAGLVRLKAGVLSQADYLNVLVQCETLEDLKLH LQSTDYGNFLANEASPLTVSVIDDRLEKEMVVEFRHMRNHAYEP LASFLDFITYSYMIDNVILLITGTLHQRSIAELVPKCHPLGSFE QMEAVNIAQTPAELYNAILVDTPLAFFQDCISEQDLDEMNIET IRNTLYKAYLESFYKFTLLGGTTADAMCPILFEADRRRAFIIT INSFGTELSKEDRAKLFPHCGRLYPEGLAQLARADDYEQVKNVA DYYPEYKLLFEGAGSNPGDKTLEDRLFEEHVKLNKLAFLNQFHF GVFYAFVKLKEQECCRNIVWIAECIAQRHRAKIDNYIPIF |
| 5564 | 3 | 914 | RVRDKRAVWTARGRRRCGDSMSGGWAQVGAWRTGALGLALL LGLGLGLEAAASPLSTPTSAQAAGPSSGSCPTKFCQRTSGLC VPLTWRCDRDLDCSDGSDDEECRIEPTCQKQCPCPPPGLEPCPT GVSDCSGGTDKKLRNCSRLACLAGEBLRCTLSDDCIPLTWRC DGH PDCPDSSDELGCCTNEILPEGDATTMGPPVTLESVTSLSRNATTM GPFVTLESVPSVGNATSSSAGDQSGSPTAYGVIAAAVLSASLV TATLLLLSWLRAQERLRPLGLLVAMKESLLSEQKTSLP |
| 5565 | 993 | 138 | RWNSPNPARAGSISRQAPGSVSAVAMTAAVFFGCAFIATFGPA LALYVFTIATEPLRIIFLIAGAFFVLVSLISSLVWFMARVID NKDGPTQKYLIFGAFVSVYIQEMFRFAYVKLLKASEGLKSIN PGETAPSMRLLAYVSGLGFGIMSGVFSFVNTLSDSLPGPTVGIH GDSPQFFLYSAFMTLVILLHVFVGIVFFDGCCKKWGILLIVL LTHLLVSAQTFISSYGINLASAFITLVLMGTWAFLAAGGSCRS LKCLLCQDKNFLLYNQSR |
| 5566 | 2043 | 1232 | SHIQHHGRGAQAPVKMVSWMISRAVVLVFGMLYPAYYSYKAVKT KNVKEVVRMMYWIWFALYTVIETVADQTVAWFPLYELKIAFV IWLLSPYTKGASLIYRKLHPLLSKEREIDDIYQAKERGYET MVNFGRQGLNLAATAAVTAAVKSQGAITERLRFSMHDLTITIQG DEPVGQRQPYQPLPEAKKKSKPAPSESAGYGIPLKDGDEKTDEEA EGPYSDNEMLTHKGPRRSQSMKSVKTTKGRKEVRYGSLKYKVKK RPQVYF |
| 5567 | 1554 | 233 | EFLGSGVSPDLANEDGLTALHQCCIDDFREMVOQLLEAGANINA CDSECWTLPHAAATCGHLHLVELLIASGANLLAVNTDGNMPYDL CDDEQTLDCLETAMADRGITQDSIEAARAVPELRMLDDIRSLQ AGADLHAPLDHCATLLHVAANGFSEAAALLLHHRASLSAKDQD GWEPLHAAAYWQVPLVELLVAHGADLNKSLMDETPLDVCGD EYRAKILLELKHKHDALLRAQSRQSRLLRRRTSSAGSRGKVVRV SLTQRTDLYRKQHAQEAIVWQPPPTSPPEPDNDROGTGAELR PPPPEDNPEVVRPHNGRVGSGSPVRHLYSKRLDRSVSYQLSPLD STTPHTLVHDKAHTLADLKRQRAAKLRPPPEGPESPETABP GLPGDVTVPQPCGFRAGDPPLKLTAPAVEAPVERRPCCLLM |
| 5568 | 1731 | 587 | AEDRQPASRRGAGTTAAMAASGPGCRSWCLCPEVPSATFFFTALL SLLVSGPRLFLQLQPLAPSGTLKSEALRNWQVYRLVTYIFVYE NPISLTCGAIITWRFAGNFERTVGTVRHCFFTVIFATFSAIIFL SFEAVSSLSKLGEVEDARGFTPVAFAMLGVTTVRSRMRRALVFG MVVPSVLPVWLLLGASWLIPTQSFSLNVCGLSIGLAYGLTYCYS IDLSERVALKLDQTFPFLMRRISVFKYVSGSSAERRAAQSRKL NPVPGSYPTQSCHPHLSPSHPVSOTQHASGQKLASWPSTPGHM PTLPPYQPASGLCYVQNHFGPNPTSSSVYPASAGTSLGIQPPTP VNSPTGVYSALGTPGAAGSKESSRVPMP |
| 5569 | 2 | 835 | QTPCP LAWERGRSEDISVPGQKPTCCSFSFGMDVGPSSSLPHLG |

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|------------|--|--|---|
| | | | LKLLLLLLLLPLRQANTGCTGIPGMPGLPGAPGKDGVDGLPGP KGEPTGPAIPGIRGPKQKGEPLPGHKGNGPMGPPGMPGVPG PMGIPGEPGEEGRYKQKFQSVFTVTRQTHQPPAPNSLIRFNAVL TNEQGDYDTSTGKFTCKVPGLYFVYHASHIANLCVLLYRSGVK VVTFCGHTSKTNQVNSGGVLLRLQVGEEVWLAVNDYYDMVGIQG SDSVFSGFLLFPD |
| 5570 | 264 | 946 | RDRDRGGVATSTEEPAPRAPQSRGPGPVSQTGRGRERGGGDT MSSPSPGKRRMDTDVVKLIESKHEVTILGGLNEFVVKFYGPQGT PYEGGVWKVRVDLPDKYPFKSPSIGFMNKIFHPNIDEASGTVC LVINQWTALYDLTNIFESFLPQLLAYPNPIDPLNGDAAAMYLH RPEEYKQKIKBYIQKYATEEALKEQEEGTGSSSESSMSDFSSED EAQDMEL |
| 5571 | 264 | 946 | RDRDRGGVATSTEEPAPRAPQSRGPGPVSQTGRGRERGGGDT MSSPSPGKRRMDTDVVKLIESKHEVTILGGLNEFVVKFYGPQGT PYEGGVWKVRVDLPDKYPFKSPSIGFMNKIFHPNIDEASGTVC LVINQWTALYDLTNIFESFLPQLLAYPNPIDPLNGDAAAMYLH RPEEYKQKIKBYIQKYATEEALKEQEEGTGSSSESSMSDFSSED EAQDMEL |
| 5572 | 2802 | 2085 | RTDYRTGIPGRFRVMAAGDGVKLTGLSCSESSNDGGSESPG DAGAAAEAGGWAALALTLTGGEMLLNVALVALVLLGAYRLWV RWGRRGLGAGAGAGEESPATSLPRMKKRDFSLEQLRQYDGS RNP RILLAVNGKVPDVTGSKFYGPAGPYGIFAGRDA SRGLATFCLD KDALRDEYDDLSDLNAVQMESVREWEMQFKEYDYVGRLLKPG EPSEYTD EEDTKDHNKQD |
| 5573 | 2562 | 219 | VPARTPNAEDQGP EARAATATPCQSGGRERAGEAAEDGVKMAAF SEMGVMPETIAQAVEEMDWLLPTDIAQESIPILIGGCDVLMMAET GSGKTGAFSIPVIQIVYETLKDQCEGKKGKTTIKTGASVLNKWQ MNPYDRGSAFAIGSDGLCCQSRREVKEWHGCRATKGLMKGHYIE VSCHDQGLCRVGWSTMQASLDLGTDFGFGGTGKSHNKQFD NYGEEFTMHDITGCLYLDIDKGHVKFSKNGKDLGLAFEIPPHMKN QALFPACVLKNAELKFNFGEEFKFPKDGVALSKAPDGYIVK SQHSGNAQVQTQKFLPNAPKALIVEPSRELAEQTLNNIKQFKKY IDNPKLRELLIIGGVAARDQLSVLENGVDIVVGTGRLDDLVST GKLNLSQVRFLVLDEADGLLSQGYSDFINRMHNQIPQVTS DGKR LQVIVCSATLHSFDDVKKLSEKIMHFPPTWDLKGEDSVDPDVHHV VVPVNPKTDRWLRLGKSHIRTDVHAKDNTRPGANSPEMWSEA IKILGEBYAVRAIKEHKMDQAIIFCRTKIDCNLEQYFFIQGGG PDKKGHQFSCVCLHGDRKPKHERKQNLERFKKGDVRFICTDVAA RGIDIHGVPIVINVTLPDBKQNYVHRIGRVGRAERMGLAISLVA TEKEKVWYHVCSSRGKGCYNTRLKEDGGCTIWNEMQLLSEIE HLNCTISQVEPDIKVPVDEDFGKVTYQKRAAGGSYKGHVDIL APTQBELAALKEAQTSLHLGLYLPNQLFRTE |
| 5574 | 1731 | 952 | NEGLEVFEQELQPEDKGAVPEDASTERSAMASLGLQVLGYILG LGLLLGLTLVAMLLPSWKTSSVVGASIVTAVGFSKGLWMECATHS TGITQCDIYSTLLGLPADIAQAAMVTSSAISLACIISVVG RCTVFCQESRAKDRVAVAGGVFFILGGLLGFIPVAWNHLGILRD FYSPLVPDSMKFEIGEALYLGIISSLSLIAGIILCFSCSCQRN RSNYDAYQAQPLATRSSPRPGQPPKVKSEFNYSYLTGYV |
| 5575 | 456 | 766 | LLWALPCPPPTAAAVLLSSTGLMELLEKMLALTAKADSFERTAL LCSAWLLTASFSAQHQKGSLOKDPILLSQACVGCLEALLDYLDR SPDIGRNSPHYLMFP |
| 5576 | 249 | 2146 | RSWGA PFWRMRLRRRHMPRLAMVGCAPVLFLLHREVVSR EATEKPKWLKSLVSRKDHVLDLML EAMNNLRDSMPKLQIRAPEA QQTLFSINQSLPGFYTPAELKPFWERPPQDPNAPGADGKAFQK SKWTPLETQEEGKYKHCNFAFASDRISLQSRSLGPDTRPEPEC DQKFRCPPLATTSVIVFHNEAWSTLLRTVYSVLHTTPAILLK ETILVDDASTEHLKEKLBQYVKQLQVVRVVRQERKGLITARL LGASVAQAEVLTFLDAHCECFHGWLEPLLARIAEDKTVVSPDI VTIDLNTFEFAKPVQGRVHSRGNFDWSLTFGWETLPPHEKQRR KDETPYIKSPTFAGGLFSISKSYFEHIGTYDNQMEINGGENVEM |

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|------------|--|--|---|
| | | | SFRVWQCGGQLEIIPCSVVGHVFRKSPHTFPKGTSVIARNQVR LAEVWMDSYKKIFYRRNLQAQMAQKSFQDISERLQLREQLHC HNFSWYLNHVYPFMFVDPDLTPTFYGAIKNLGTNQCCLDVGENNRG GKPLIMYSCHGLGNGQYFEYTTQDRLRHNIQKQLCHVSKGALG LGSCHFTGKNSQVPKDEEWELAQDQLIRNSGSGTCLTSQDKKPA MAPCNPSPDPHQLWLFV |
| 5577 | 3 | 1275 | RNSDCSCGEISVHCLPWVLFILDLKVESSMFCPLKLLLPVLLD YSLGNDLNVSPPELTVHVGDSALMGCVFQSTEDKCFKIDWTL SPGEHAKDEYVLYYYNSLSPVIGRFQNRVHLMGDILCNDGSLLL QDVQEAQDQTYICEIRLKESQVFKKAVVLHVLPBEPKELMVHV GGLIQMGCVFQSTEVKHVTKVEWIFSGRRAKEEIVFRYYHKLRLM SVEYSQSWGHFQNRVNLVGDIFRNDGSIIMLOGVRESGNGYTC S IHLGNLVFKKTIIVLHVSPPEPRTLVTPAALRPLVLGGNQLVIIV GIVCATILLPLVLLIVKKTGCGNKSSVNSTVLVNTKKTNPRIK EKPCHFERCEGEKHIYSPITIVREVIEEPEPSEKSEATYMTMHPV WPSLRSDRNNLEKKSGGGMPTQQA |
| 5578 | 3 | 783 | AVESMASPGAGRAPPPELPERNCYREVEYWDQRYQGAADSAPYD WFGDFSSFRALLEPELPELDRILVLGCGNSALSYELFLGGFENV TSVDYSSVVVAAMQARYAHVPQLRWETMDVRKLDFPSASFVVL EKGTLDALLAGERDPWTVSSEGVHTVDQVLSVSRVLVPGGRFI SMTSAAPHFRTRHYAQAYYGWSLRHATYSGTFHFLYLMHKGGK LSAQALCALCAQILSPRPPTSPCFLQDSDHEDFLSAIQ |
| 5579 | 3 | 1540 | RNSGLARGASALARHGGGLAGGVGWDGACASRCQGVMEGLLTR CRALPALATCSRQLSGYVPCRFHHCAPRRGRRLLSRVFQPNL REDRVLSLQDKSDDLTCKSQRLMLQVGLIYPASPGCYHLLPYTV RAMEKLVRIIDQEMQAIGGQKVMNPSPSLPAELWQATNRWDLMGK ELLRLDRRHGKEYCLGPTHEEAITALIASQKKLSYKQLPFLLYQ VTRKFRDEPRPRFGLLRGREFYMKDMYTFDSSPEAAQQTYSILVC DAYCSLFNKLGLPFVKVQADVGTIGGTVSHEFQLPVDIGEDRIA ICPRCSFSANMETLDLSQMNCPACQGPLTKTKGIEVGHTFYLG T KYSSIFNAQFTNVCGKPTLAEMGCYGLGVTRILAAAIEVLSTED CVRWPSLLAPVQACLI PPKGSKBQAASELIGQLYDHTEAVPQ LHGEVLLDDRTHLTIGNRLKANKFGYFPFVI IAGKRALEDPAHF EVWCQNTGEVAFITKDGVMDDLTPVQTV |
| 5580 | 1681 | 450 | ADAGTRCIPGVFVPSGAGYSAPAQRRSSSGRMRAAAPGLTAP WRLLQCCLEAGELGMVPAAMGPSALGQSGPGSMAPWCSVSS GPSRYVLGMQELFRGHKSTREFLAHSAKVHSAWSCDGRRLASS SFDKTASVFLLEKDRLVKENNYRGHSDVDQLCWHPSPNDFLVT ASGDKTIRIWDVRTTKCIATVMTKGENINICWSPDQGTIAVGNK DDVTFIDAKTHRSKAEQKFQFVNEISWNNNDNNMFLTNGNGC INILSYPELKPVSINAHPSNCI CIKFDPMGKYFATGSADALVS LWDVDELVCVRCSRLDWPVRTLSFSHDGKMLASASEDHFDIA EVETGDKLWEVQCESPTFTVAWHFKRPLLAFCADDKDGKYDSSR EAGTVKLFGLPND |
| 5581 | 54 | 947 | GGSGPRAPSATLLDTGESVAASGEDKGIASAAAAAVFACS CSPDPQSSTMNVPVSPVQPGAPYGNPKNMAYTGYPAYPAAAPA YNPISLYPTNSPSYAPFQFLHSAYATLLMKQAWPQNSSSCGTEG TFHLPVDTGTENRTYQASSAAFRYTAGTPYKVPPTQSNATPPY SPSPNPYQTAMYP IRSAYPQQLYAGGAYYTQPVYAAQPHVIH TTVVQPNISIPAIYPAFVAAPRTNGVAMGVAGTMTAMSAGTLL TTPQHTAIGAHPVSMPTYRAQGTTPAYSIVPPHW |
| 5582 | 5775 | 2739 | ITNNNNVITPLVIAVHLSGSAQARGERSPAERLMERQKRKADI EKGLQFIQSTLPLKQEEYBAFLKLVLONLFAEGNDLFRKDYKQ ALVQYMEGLNVADYAAASDQVALPRELLCKLHVNRACFYTMGLY EKALEDSEKALGLDSESIRALFRKARALNELGRHKEAYECSSRC SLALPHDESVTQLGQELAQLGLRVRKAYKRPQLETFGLLSNG TAAGVADQGTSNGLGSIDDIETDCYVDPGSPALLPSTPTMPLF PHVLDLLAPLSSRTLPSTDSLDDFSDGDVFGPELDTLLESLSL VQGGLSGSGVPSELPLQIPVFPGGTFLLPVVGGSIPVSSPLPP ASFGLVMDPSKKLAASVLDALDPPGPTLDPDLLPYSETRLDAL |

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|------------|--|--|--|
| | | | DSFGSTRGSLDKPDSFMEETNSQDHRPPSGAQKPPSPSEPCMFNTALLIKNPLAATHEFKQACQLCYPKTGPRAGDYTYREGLEHKCKRDILLGRLRSSEDTWKIRIRPRPTKTSFVGSYYLCKDMINKQDC KYGDNCTFAYHQEEIDVWTEERKGTNLNRDLFDPLGGVKGSLTIAKLLKEHQGIFTFLCEICFDSKPRIISKGTKDSFVCSNLAAGHSFYNNKCLVHIVRSTSLKYSKIROFQEHFQFDVCRHEVRYGCLREDSCHFAHSFIELKVWLLQQYSGMTHEDIVQESKKYQQMEAHAGKASSSMGAPRTHGPTFDLQMKFVCCQCCWRNGQVVEPDKDLKYCSAKARHCWTKERRVLLVMSKAKRKNVSVRPLPSIRNFPQQYDLCIHAQNGRKCQYVGNCSFAHSPEERDMWTFMKENKILDMQQTYYDMWLKKNPCKPGEPTPISREGEKQIQMPTDYADIMMGYHCWLCKNSNSKKQWQHHIQSEKHKEKVFTSDSDASGWAFFPMGEFRLCDRLQKGAACPQDGDKCRCAHGQEELNEWLDREVLKQKLAKARKDMLLCPRDDDFGKYNFLQEDGDLGATPEAFAPAAATATTTGE |
| 5583 | 3 | 1265 | SSGCRQGRPRGRSDRPRPPRRHKMVKETRYDILGVKPSASPEEIKKAYRKLALKYHPDKNPDEGEKFKLISQAYEVLSDPKKRQVYDQGGEQAIKEGGSGSPSFSSPMDIFDMFFGGGGRMARERRGKNVHQLSVTLEDLYNGVTKKLALQKNVICKEGEGVGGKKSVEKCPCLKGRGMHIHQIGPGMVQIQITVCIECKGQGERINPKDRCESCSGAKVIREKKIIEVHVEKGMKDGQKILFHGEQDQEPPELEPGDVIIVLDQKDHVSFQRRGHDLIMMKIQLSEALCGFKKTIKTLNRI LVTISKAGEVIKHGDLRCVRDEGMPYKAPLEKGLIIQFLVIFPEKHWSLEKLPQLEALLPPRQKVRITDDMDQVELKEFCPNEQNWRQHREAYEDEDGPPQAGVQCQTA |
| 5584 | 3 | 1265 | SSGCRQGRPRGRSDRPRPPRRHKMVKETRYDILGVKPSASPEEIKKAYRKLALKYHPDKNPDEGEKFKLISQAYEVLSDPKKRQVYDQGGEQAIKEGGSGSPSFSSPMDIFDMFFGGGGRMARERRGKNVHQLSVTLEDLYNGVTKKLALQKNVICKEGEGVGGKKSVEKCPCLKGRGMHIHQIGPGMVQIQITVCIECKGQGERINPKDRCESCSGAKVIREKKIIEVHVEKGMKDGQKILFHGEQDQEPPELEPGDVIIVLDQKDHVSFQRRGHDLIMMKIQLSEALCGFKKTIKTLNRI LVTISKAGEVIKHGDLRCVRDEGMPYKAPLEKGLIIQFLVIFPEKHWSLEKLPQLEALLPPRQKVRITDDMDQVELKEFCPNEQNWRQHREAYEDEDGPPQAGVQCQTA |
| 5585 | 2619 | 915 | LPAGTPESSLHEALDQCMTALDFLTNQFSEALS YLKPRTKESM YHSLTYATILEMQAMMTFDPQDILLAGNMMKEAQMLCQRHRRKS SVTDSFSSLVNRPTLGQFTEETIHAEV CYAKCLLQRAALTFLQDENMVSFIKGGIKVRNSYQTYKELDSLQSSQYCKGENHHPFEGGVKLGVGAFNLTL SMLPTRILRLLEFVGFSGNKDYGLLQLEBEGAS GHSFRSVLCVMLLLCYHTFLTFVLGTGNVNIIEBAEKLLKPYLNRYPKGAIFLFLAGRIEVIKGNIDAAIRRFEECCQAQQHWKQFHHM CYWELMWCFYKQGWKMSYFYADLLSKENCWSCATYIYMKAAYL SMFGKEDHKPFGDDEVELFRAVPGKLKTIAGKSLPTEKFAIRKS RRYFSSNPISLPVPALEMMYIWNKYAVIGKQPKLTDGILEIITK AEEMLEKGPENEYSVDDECLVKLLKGLCLKYLGRVQEAENFRS ISANEKKIKYDHYLIPNALLELALLMEQDRNEEAIKLLESASQ NYKNYSMESRTHFRITQAATLQAKSSLENSRSRSMVSSVSL |
| 5586 | 2619 | 915 | LPAGTPESSLHEALDQCMTALDFLTNQFSEALS YLKPRTKESM YHSLTYATILEMQAMMTFDPQDILLAGNMMKEAQMLCQRHRRKS SVTDSFSSLVNRPTLGQFTEETIHAEV CYAKCLLQRAALTFLQDENMVSFIKGGIKVRNSYQTYKELDSLQSSQYCKGENHHPFEGGVKLGVGAFNLTL SMLPTRILRLLEFVGFSGNKDYGLLQLEBEGAS GHSFRSVLCVMLLLCYHTFLTFVLGTGNVNIIEBAEKLLKPYLNRYPKGAIFLFLAGRIEVIKGNIDAAIRRFEECCQAQQHWKQFHHM CYWELMWCFYKQGWKMSYFYADLLSKENCWSCATYIYMKAAYL SMFGKEDHKPFGDDEVELFRAVPGKLKTIAGKSLPTEKFAIRKS RRYFSSNPISLPVPALEMMYIWNKYAVIGKQPKLTDGILEIITK AEEMLEKGPENEYSVDDECLVKLLKGLCLKYLGRVQEAENFRS ISANEKKIKYDHYLIPNALLELALLMEQDRNEEAIKLLESASQ NYKNYSMESRTHFRITQAATLQAKSSLENSRSRSMVSSVSL |
| 5587 | 1768 | 148 | SSAVPDGAVGRPVAVAVGGPEHSCRCRCPCLMAAIGVHLGCTSA |

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|------------|--|--|--|
| | | | CVAVYKDGKAGVAVDAGDRTVPAVVAYSENEIIVGLAAKQSRI RNISNTVMKVKQILGRSSSDPQAQKYIAESKCLVIEKNGKLRVE IDTGBETKFNVPEDVARLIFSKMKETAHSVIGSDANDVVITVPF DFGEKQKNALGEAARAAGFNVLRILHEPSAALLAYGIGQDSPTG KSNILVFKLGGTSLSLSVMEVNSGIYRVLSNTDDNIGGAHFTS TLAQYLASEFQSFKHDRVGNARMMKLTNSAEVAKHSLSTLGS ANCFDLSLYEGQDFDCNVSRARFELLCSPFNKCIETAIRGLLDQ NGFTADDINKVVLCCGSSRI PKLQQLIKDLFPVAVELLNSIPPDE VIPIGAAIEAGILIGKENLLVEDSLMIECSARDILVKGVDESQA SRFTVLFPSTGTPARRQHTLQAPGSTSSVCLLEYSDGKNSAK EETKFAQVVLQDLDDKKENGLRDILAVLTMKRDGSLHVTCTDQET GKCEAISIETIAS |
| 5588 | 3 | 589 | TPPPPEQAMVAATVAAWLLWAAACAQQEQDFYDFKAVNIRGK LVSLEKYRGSVSLVVNVASECGFTDQHYRALQQLQDLGPHHFN VLAFFPCNQFQQEPDSNKEIESFARTYSVSFFMFSKIATVTGTG AHPAFKYLAQTSKGKEPTWNFWKYLAPDGVGVGAWDPTVSVVEEV RPQITALVRKLILLKREDL |
| 5589 | 1884 | 553 | LRQAWHEGGIGQTDKERGAALPGEEGDPTRGRSLGRASWESGS PRRPRSPFSSFLPRPICLSLEARPCSIEDRRNWSLIGRPGAPAS GLNRSSGLWLGPDRCRPRSRCSRVMENPSPAAALGKALCALLL ATLGAAGQPLGGESIC SARAPAKYSITFTGKWSQAFPKQYPLF RPPAQWSSLLGAHSSDYSMWRKNQYVSNGLRDFAEERGEAWALM KEIEAAGEALQSVHAVFSAPAVPSTGTQTSAELEVQRRHSLVSF VVRIVPSPDWFGVDSLDLDCGDRWREQAALDLYPYDAGTDSGF TFSSPNFATIPQDVTETITSSSPSPHANSFYPRKLALPPIARV TLRLRLQSPRAFIPAPVLP SRDNEIVDSASVPETPLDCEVSLW SSWGLCGGHCGRGLGTSRTRYVRVQPANNGSPCPELEEEAEBCVP DNCV |
| 5590 | 72 | 896 | LCSSGALRLLPAMVAWRSATLVCLAFSLATLVQRGSGDFDDFNL EDAVKETSSVKQPDHHTTTTINRPGTTAPAKPPGSGDLADADA LDDQDDGRRKPGIGGRERNVHTTTTKRPVTTAPANTLGNDFD LADALDDNRDRDGRKPIAGGGGFSDDKLEDIVGGGEYKPKDKG KGDGRYGSNDPFGSGMVAEPGTIAGVASALAMALICAVSSYISY QQKKFCFSIQQLNADYVKGLENLEAVVCEEPQVKYSTLHTQSAE PPPPPEPARI |
| 5591 | 68 | 1494 | AGSSRRAAAERLLVSAGCRSLAGRASGVLLLPALLPGEHEAMA LRVTRNSKINAENKAKINMAGAKRVTAPAAATSKPGLRPRTALG DIGNKVSEQLQAKMPMKKEAKPSATGKVIDKKLPKPLEKVFMLV PVPVSEPVPEPEPEPEPVKEEKLSEPIILVDTASPSMETSG CAPAEEDLCQAFSDVILAVNDVDAEDGADPNLCSBYVKDIYAYL RQLEEEQAVRPKYLLGREVTGNMRAILIDWLQVQMKFRLLQET MYMTVSIIDRFMQNNCVPKMKLQLVGVMTAMFIASKYEEMYPPEI GDFAFVTDNTYTKHQIRQMEMKILRALNFGRLPLPLHFLRRAS KIGEVDVEQHTLAKYLMELTMDYDMVHFPPSQIAAGAFCLALK ILDNGEWTPTLQHYLSYTEESLLPVMQHLAKNAAMVNQGLTKHM TVKNKYATSKHAKISTLPQLNSALVQDLAKAVAKV |
| 5592 | 242 | 924 | YGESKDWNQDLISALVLTVNCLPTPIMAKSAEVKLAIFGRAG VGKSALVVRFLTKRFIWEYDPTLESTYRHQATIDDEVVSMEILD TAGQEDTIOREGHMRWEGFVLVYDITDRGSFEEVLPKLNILDE IKKPKNVTLILVGNKADLDHSRQVSTEEGEKLATELACAFYECS ACTGEGNITCIFYELCREVRRRRMVQGKTRRRSSTTHVQAINK MLTKISS |
| 5593 | 3 | 1113 | HASGGRAANMAAERGAGQQSQEMMEVDRRVESEESGDEEGKKH SSGIVADLSEQSLKDGEERGEEDPEEHELFPVDMETINLDRDAE DVDLNYHRIKIEGFEVLKKVKTCLQRNLKICLENLEELQSLR BLDLYDNQIKKIENLEALTELEILDISPNNLRNIEGVDKLTRLK KLFLVNNKISKIENLSNLHQLQMLELGSNRIRAIENIDTLTNLE SLFLGKKNKITKLQNLDAITNLTVLSMQSNRLTKIEGLQNLVNL ELYLSHNGIEVIEGLENNNKLTMLDIASNRICKIENISHLTBLQ EFWMNDNLLESWSDLELKGARSLETVYLERNLQKDPQYRRKV |

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|------------|--|--|---|
| 5594 | 3 | 1113 | MLALPSVRQIDATFVRF HASGGRAANMAAERGAGQQSQSEMMEVDRRVESEESGDEEGKKH SSGIVADLSEQLKDGEEERGEEDPEEEHELVPDMETINLDRDAE DVDLNHYRIGKIEGFVLKKVKTLCRQNLKICENLEELQSLR ELDLYDNQIKKIEENLEALTELEILDISFNLLRNIEGVDKLTRIK KLFLVNNKISKIENLSNLHLQMLLELGSNNRIRAIENIDTLTNLE SLFLGKNKITKLQNLDAITNLTVLSMQSNRLTKIEGLQNLVNL ELYLSHNGIEVIEGLENNNNKLTMLDIASNRIKKIENISHLTBLQ EFWMNDNLLESWSDLDLKGARSLETVYLERNPLQKDPQYRRKV MLALPSVRQIDATFVRF |
| 5595 | 3 | 1476 | ARWNGRVQVPANPGPGCGTNASGERQRLPRAWRPVGRITLGE PILAWSPPLYLFPIPLPSWAVSQPTPTLGTWFAADLDYDIEDK LGIPTPVGKVTLOKDAQNLIGISIGGGAQYCPCLYIVQVFNTP AALDGTVAAGDEITGVNGRSIKGKTKVEVAKMIQEVKGEVTIHY NKLQADPKQMSLDIVLKKVKHRLVENMSSGTADALGLSRAILC NDGLVKRLLEELERTABLYKGMTHTKNLLRAFYELSQTHRAFGD VFSVIGVREPQPAASEAFVKFADAHRSIEKFGIRLLKTIKPMPL DNLTYLNKAIPTRLTIKKYLDVKFEYLSYCLVKEMDDEEYSC IALGEPLYRVSTGNYEYRLILRCRQEARARFSQMRKDVLEKME LDQKHVQDIVFQLQRLVSTMSKYNDYAVLRDADVFPIEVDLA HTTLAYGLNQEEFTDGESEEEEEEDTAAGEPSRDRGAAGPLDKG GSWCDS |
| 5596 | 698 | 219 | GAVLAPSSLPAAELAAQGESQSLEDLSNTRPTSEVYKISFIFP NGDKYDGDCTRTSSGIYERNIGIHTTPNGIYVYTGSKWDDKMNG FGRLEHFSGAVYEGQFKDNMFHGLGTYTFPNGAKYTGNNENRV KGEGETHYIQGTRMDVVTFFHTSCSQ |
| 5597 | 3 | 731 | ISCKMAADGQSSLPASWRSVTLTHVEYPAGDLSGHLAYLSLSP VFIIVGFVTLLIFKRELHTISFLGGLALNEGWNWLIKNIQEP PCGGPHTAVGTKYGMPSHSHSQFMWFFSVYSFLFLYLRMHQTNNA RFLDLLWRHVLSLGLLAVAPLVSYSRVYLLYHTWSQVLYGGIAG GLMAIAWFIFTQEVLTPLFPRIAAPVSEFFLIRDTSLIPNVLW FEYTVTRAEARNRQRKLGTKLQ |
| 5598 | 326 | 2440 | GIGPIAASFIFCKVASLYIFLSPPPPSVSGVPYSPANSSWSCAL VPLLGSVPPPHPPAPSPCCSQQTMLKMLSFKLLLLAVALGFFEG DAKFGERNEGSGARRRRCLNGNPPKRLKRRDRRMSQLELLSGG EMLCGGFYPRLSCLLSDSPGLGRLENKIFSVTNTECGKLLLE IKCALCSPHSQSLFHSPEPERVLERDLVPLLCCKDYCKEFFYTCR GHIPGFLQTTADEFCFYARKDGGGLCFDPFPRKQVRGPASNYLD QMEEDYKVEEISRKHKNCFICQEVVSGLRQPVGALHSGDGSQR LFILEKEGYVKILTPGEIFKEPYLDIHKLVQSGIKGGDERGLL SLAFHPNYKKNGKLYVSYTTNQRWAIGPHDHILRVVEYTVSRK NPHQVDLRTARVFLEVAELHRKHLGGQLLFGPDGFLYIILGDGM ITLDDMEEMDGLSDFTGSVLRDLVDITDMCNVPYSIPRNPWFNS TNQPPPEVFAHGLHDPGRCAVDRHPTDININLTILCSDSNGKNRS SARILQIKGKDYSEPSLLEFKPFSNGPLVGGFVYRGQCSERL YGSYVFGDRNGNFLTQQSPVTKQWQEKPLCLGTSGSCRGYFSG HILGFGDELGEVYILSSSKSMTQTHNGKLYKIVDPKRLPMPEE CRATVQPAQTLTSECSRLCRNGYCTPTGKCCSPGWEGDFCRTG GIGPIAASFIFCKVASLYIFLSPPPPSVSGVPYSPANSSWSCAL VPLLGSVPPPHPPAPSPCCSQQTMLKMLSFKLLLLAVALGFFEG DAKFGERNEGSGARRRRCLNGNPPKRLKRRDRRMSQLELLSGG EMLCGGFYPRLSCLLSDSPGLGRLENKIFSVTNTECGKLLLE IKCALCSPHSQSLFHSPEPERVLERDLVPLLCCKDYCKEFFYTCR GHIPGFLQTTADEFCFYARKDGGGLCFDPFPRKQVRGPASNYLD QMEEDYKVEEISRKHKNCFICQEVVSGLRQPVGALHSGDGSQR LFILEKEGYVKILTPGEIFKEPYLDIHKLVQSGIKGGDERGLL SLAFHPNYKKNGKLYVSYTTNQRWAIGPHDHILRVVEYTVSRK NPHQVDLRTARVFLEVAELHRKHLGGQLLFGPDGFLYIILGDGM ITLDDMEEMDGLSDFTGSVLRDLVDITDMCNVPYSIPRNPWFNS TNQPPPEVFAHGLHDPGRCAVDRHPTDININLTILCSDSNGKNRS |
| 5599 | 326 | 2440 | GIGPIAASFIFCKVASLYIFLSPPPPSVSGVPYSPANSSWSCAL VPLLGSVPPPHPPAPSPCCSQQTMLKMLSFKLLLLAVALGFFEG DAKFGERNEGSGARRRRCLNGNPPKRLKRRDRRMSQLELLSGG EMLCGGFYPRLSCLLSDSPGLGRLENKIFSVTNTECGKLLLE IKCALCSPHSQSLFHSPEPERVLERDLVPLLCCKDYCKEFFYTCR GHIPGFLQTTADEFCFYARKDGGGLCFDPFPRKQVRGPASNYLD QMEEDYKVEEISRKHKNCFICQEVVSGLRQPVGALHSGDGSQR LFILEKEGYVKILTPGEIFKEPYLDIHKLVQSGIKGGDERGLL SLAFHPNYKKNGKLYVSYTTNQRWAIGPHDHILRVVEYTVSRK NPHQVDLRTARVFLEVAELHRKHLGGQLLFGPDGFLYIILGDGM ITLDDMEEMDGLSDFTGSVLRDLVDITDMCNVPYSIPRNPWFNS TNQPPPEVFAHGLHDPGRCAVDRHPTDININLTILCSDSNGKNRS |

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|------------|--|--|--|
| 5600 | 1977 | 1244 | SARILQTIKGDYSEPSLLEFKPFSNGPLVGGFVYRGCSERL YGSYVFGDRNGNFTLQQSPVTKQWQEKPLCLGTSGSCRGYFSG HILGFGEDLGEVYILSSSKSMTQTHNGKLYKIYDPKRLMPPEE CRATVQPAQTLTSECSRLCRNGYCTPTGKCCSPGWEGDFCRTG SLRVLSGHLMQTRDLVQDPKPASPKFIVITLDGVSPPGYMSDQE EDMCFEGMKPVNQTAASNKGLRGLLHPQQLHLLSRQLEDPNGSF SNAEMSELVAQKPEKLLERCKYWPACNGDECAVHHPI SPCKA FPNCCKFAEKCLFVHPNCKYDAKCTKPDCEPFTVHSRRIPVLSKP AVAPPAPSSSQLCRYFPACKKMECPFYHPKHCRFNTQCTRPDC TFYHPTINVPFRHALKWIRPQTSE |
| 5601 | 1977 | 1244 | SLRVLSGHLMQTRDLVQDPKPASPKFIVITLDGVSPPGYMSDQE EDMCFEGMKPVNQTAASNKGLRGLLHPQQLHLLSRQLEDPNGSF SNAEMSELVAQKPEKLLERCKYWPACNGDECAVHHPI SPCKA FPNCCKFAEKCLFVHPNCKYDAKCTKPDCEPFTVHSRRIPVLSKP AVAPPAPSSSQLCRYFPACKKMECPFYHPKHCRFNTQCTRPDC TFYHPTINVPFRHALKWIRPQTSE |
| 5602 | 246 | 766 | YHTSCTVWRTAKEALENTEVPVGLMVYNNEVVGKGRNEVNQTK NATRHAEMVAIDQVLDWCROSGKSPSEVFETVTVVTVPEPCIMC AALRLMKIPLVYVYGQNERFGGCGSVNTASADLPNTGRPFQC IPGYRAEEAVEMLKTFYKQENPNAPKSKVRKKECQQLNMF |
| 5603 | 1 | 565 | FRGRTPISGGERGCAQYPIPATPARSGENRTMPGAGDGGKAPAR WLGTGLLGLFLLPVTLSEVSVGKATDIYAVNGTEILLPCTFSS CFGFEDLHFRWTYNSSDAFKILIEGTVKNEKSDPKVTLKDDRI TLVGSTKEKRNINISIVLRDLFSDTGKYTCHVKNPKENNLOHHA TIFLQVVDRRMQ |
| 5604 | 1 | 1506 | EDIFPAQLLKLQRHERVWQEQEPPVRDHRWSGGSGAGGVAGREWT DQGVVALGGHYMAEGEGYFAMSEDELACSPYIPLGGDFGGDFG GGDGFGGDFGGDFGGGSGFGGHCLDYCESPTAHCNVLNWEQVQ RLDGILSETIPIHGRGNFTLELQPSLTVKVVRRRLAEKRIGVR DVRLNGSAASHVLHQDSGLGYKDLDLIFCADLRGEFQTVKDV VLDCLDLPLPEGVNKEKITPLTLKEAYVQKMKVCNDSDRSLI SLNNNSGKNVELKFVDSLRRQFEFSVDSFQIKLDSLLLFBYECSE NPMETETFHPTIIGESVYGDFOEAFDHLCKNIATRNPEEIRGGG LLKYCNLLVVRGFRPASDEIKTLQRYMCSRFFIDFSDIGEQQRKL ESYLQNHVGLBDRKYEYLMTLHGUVNESTVCLMGHERRQTLNL ITMLAIRVLADQNVIPNVANVTCTYQYQAPYVADANFSNYIAQV QPVFTCQQQTYSTWLPCN |
| 5605 | 35 | 1821 | SQRSCPRSPSPAPPWARCSNPDSRTGGVPVPRAWSAGGPAIGL MAAPVRLGRKRLPACPNPLFVRWLTEWRDEATRSRHRTRFVQ KALRSLRRYPLPLRSGKEAKILQHFGDGLCRMLDERLQRHRTSG GDHAPDSPSGENSPAPQGRLAEVQDSSMPVPAQPKAGGSGSYWP ARHSGARVILLVLYREHLNPNNGHFLTKLEELLQRCQKSPRVAP GSARPPWALRSLHLRNLVLRTHQPARYSLTPEGLELAQKLAESE GLSLLNVGIGPKEPPGEETAVPGAASAEASEAGVQQQPLELRP GEYRVLLCVDIGETRGGGHRPELLELQRLHVTHTVRKLHVGDV VWVAQETNPRDPANPGLVLDHIVERKRLDDLCSIIDGRFREQ KFRCLKRCGLERRVYLVEEHGSHVNLSPLESTLLQAVINTQVIDG FVVKRTADIKESAAYLALLTRGLQRLYQGHTLRSRPWGTGPNPE SGAMTSPNPLCSLLTFSDFNAGAIKNKAQSVREVFARQMLQVRG VSGEKAALVDRYSTPASLLAAYDACATPKEQETLLSTIKCGR LQRNLGALSRTLSQLYCSYGFLT |
| 5606 | 3 | 1099 | GRSRCPGPGARGGTMSPRSLRSLRLLVFAVFSAAASNWLYLAK LSSVGSISEETCEKLGKLIQRQVQMKRNLLEVMSVRRGAQLA IEBCQYQFRNRWNCSTLDSLPVFGKVVTQGTREAAFYAIISSA GVAFVTRACSSGELEKCGCDRTVHGVSQGFQWQSGCSNIIAYG VAFSQSFVDVRESKGASSSRALMNLHNEAGRKAILTHMRVEC KCHGVSGSCVKTWRAVPPFRQVGHALKEKFDGATEVEPRRVG SSRALVPRNAQFKPHTDEDLVYLEPSPDFCEQDMRSGVLGTRGR TCNKTSKAIDGCELLCCGRGFHTAQVELAERCCCKFWCCFVKC RQCQRLVELHTCR |

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|------------|--|--|--|
| 5607 | 521 | 141 | PPVCNPAEAMPSPGTVCSSLLLLGLMLWLDLAMAGSSFLSPHEQRV QQRKESKKPPAKLQPRALAGWLRPBDGGQAEGAEDELEVRFNAP FVDGKILSGVQYQQHSQALGKFLQDILWEEAKEAPADK |
| 5608 | 2 | 983 | WFQSPILRQADPGPPRHTLFMDFFVAGAIGGVCDAVGYPDLTVKV RIQTEPKYTGTHWCVRDTHYRERVWGFYRGLLPLVCTVSLVSS VFGTYRHCLAHICRLRFGNPDAPKTKADITLSCASGLVRVFLT SPTVEAKVRLQTOQAQKQORRLSASGPLAVPPMCPVPPACPEP KYRGPLHCLATVAREBGLCGLYKGSSALVLRDGHSEFATYFLSYA VLCEWLSAPAGHSRDPVPGVLVAGGCAGVLAWAVATPMDVIKSR LQADGGQRRYRGLLHCVTIVREEGPRVLFLKGLVLNCCRAFPVN MUVFVAYBAVLRRLARGLLT |
| 5609 | 1628 | 304 | AKGVWVLPSPPPRPGRGALVSGSLRRGRSGTSWRPRRMNHKSK KRIRKAKRSARPELKDSLDWTRHNYYESFSLSPAADVADNVERAD ALQLSVEEFVRYERPYKPVVLLNAQEGWSAQEKWTLERLKRKY RNQKFKCGEDNDGYSVKMKMKYIIEYMESTRDDSPLYIFDSSYG EHPKRRKLEDDYKVPKFFTDLLFQYAGEKRRPPYRWVFMGPPRS GTGIHIDPLGTSANALVQGHKRWCLFPPTSTPRELIVTRDEGG NQODEAITWFNVIIYPTQLPTWPEFKPLEILQKPGETVFPVGG WWHVVLNLDTTIATQNFASSTNFPVVVHKTVRGRPKLSRKWYR ILKQEHPELAVLADSVDLQESTGIASDSSSSSSSSSSSSSSSDS SECESGSEGDGTVHRRKKRRTCSMVGNDTTSQDDCVSKERSSS R |
| 5610 | 54 | 1196 | LERTPASADMAWTKYQLFLAGLMLVTGSINTLSAKWADNFMMAEG CGGSKHESFQHPFLQAVGMFLGEFSCLAIFYLLRCRAAGQSDSS VDPQQPFNPLFLPALCDMTGTSLMYVALNMTSASSFQMLRGA VIIIFTGLFSVAFGLGRRVLVSQWLGILATIAGLVVVGLADLLSKH DSQHKLSEVITGDLLIIMAQIIIVAIQMVLEEFVYKHNHPLRA VGTGLFGFVILSLLVPMYYIPAGSFSGNPRGTLEDALDAFCQ VGQQLIAVALLGNISSIAFFNFAGISVTKELSATTRMVLDSLR TVVIWALSLALGWEAFHALQILGFLILIGTALYNGLHRLPLGR LSRGRPLAESEQEERLLGGTRTPINDAS |
| 5611 | 2 | 577 | FVLNRLGTFPGSTFRGPGACASSSSLAASAKPGAGGSPALAMSG ELSNRFQGGKAFGLLKAQERRLAEINREFLCDQKYSDENLPE KLTAFKEKYMFDLNNEGEIDLMSLKRMMKLGVPKTHLEMKKM ISEVTGGVSDTISYRDFVNMMLGKRSVAVLKLMMFEGKANESSP KPVGPPPERDIASLP |
| 5612 | 1 | 721 | ASRDGYMDATIAPHRIPEMPQYGEENHIFELMQAMWLCKHLS SLLTLENLILNEFSYTATEARRLYLQKRTVPGALLVQLIQLERLA EEDCIKQGWILDGIPETREQALRIQTLGITPRHIVILSAPDVL IERNLGKRIDPQTGEIYHTTFDWNPPSEIQNRLMVPEDISELET AQKLEHYHRNIVRVIPSYPKILKVISADQPCVDVFFQALTYVQS NHRTNAPFTPRVLLGPGVS |
| 5613 | 115 | 1279 | RGVDPALRRAEKMLPLSTKDDEYKPPKFNLFKISGWFRSILSD KTSRNLFFFLCLNLSFAFVELLYGIWSNCLGLISDSFHMFFDST AILAGLAASVISKWRDNDAFSYGYVRAEVLGAFVNGFLIFTAF FIFSEGVERALAPPDVHHERLLVSLGFFVNIGIFVFKHGGH GHSHGSGHSHSLFNGALDQAHGHVDHCHSHEVKHGAHSHDH AHGHGHFHSHDGPSLKETTGPSRQILQGVFLHILADTLGSGIVI ASAIMMQNFGLMIADPICSLIAILIVSVIPLLRRESVGIIMQR TPPLLENSLPQCYQRVQQLQGVYSLQEQHFWTLCSDVYVGTLLK L I VAPDADARWILSQTHNIFTQAGVRQLYVQIDFAAM |
| 5614 | 3 | 1268 | LLSRNEHACPLQAGLGLTQKPKAIRGREGRATNQOQGETONER APWGARQLRGVMAELQQLQEFPIPTGREALRGHNSALLRVADYC EDNYVQATDKRKALEETMAFTTQALASVAYQVGNLAGHTLRMLD LQGAALRQVEARVSTLQGMVNMHMEKVARREIGTLATVQRLPPG QKVIAPENLPPLTPYCRPLNFGCLDDIGHGKIDLSTQLSRTGT LSRKSIKAPATPASATLGRPPRIPEPVHLVVPDGRLSAASSA SLASAGSAEGVGGAPTPKGQAAPPAPPLPSSLDPPPPPAAVEVF QRPPTLEELSPPPDEELPLPLDLPPPPPLDGDDELCLPPPPPGF GPDEPSWVPASYLEKVVTLYPYTSQKDNELSFSEGTVICVTRY |

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|------------|--|--|---|
| 5615 | 9 | 1558 | SDGWCCEGVSSSEGTGFFPGNYVEPSC ALGRRRPGDPREMEAAATPAAAGAAARREELDMVMRPLINEQNF DGTSGDEEHEQELIPVQKHVQLDDQEGISFVQTLMLHLKGNIGTG LLGLPLA ⁻ KNAGIVLGPISLVFIGIISVHCMHILVRCSHFCLDR FKKSTLGYSDTVSFAMEVSPWSC ⁻ LQKQAAWGRSVVDFFLVITQL GFCSVYIVFLAENVKQVHEGFLESKVFISSNSTSSNPCERRSVD LRIYMLCFLPFIIILLVFTIRELKNLFVLSFLANVSMVSLVVIYQ YVVRNMPDPHNLPIVAGWKKYPLFFGTAVFAFEGIGVVLPLENQ MKESKRFPQALNIGMGIVITLYVTLATLGVMCFHDEIKGSITLN LPQDVWLYQSVKILYSFGIFVTYSIQFYVPAEIIIPGITSKFHT KWKQICEFGIRSLVSITCAGAILIPRLDIVISFVGAVSSSLA LILPPLVEILTFSKEHYNIWMVLKNISIAFTGVVGPLLGTYITV EEIIYPTPKVVAGTPQSPFLNLNSTCLTSGLK |
| 5616 | 1 | 719 | DDFVRCGPQSAAMGASARLLRAVIMGAPGSGKGTVSSRITTHFE LKHLSGGDLRLDNMLRGTEIGVLAKAFIDQGLIPDDVMTRLAL HELKNLTQYSWLLDGFPRTLPOAEALDRAYQIDTVINLNVPEV IKQRLTARWIHPASGRVYNIEFNPPKTVGIDDLTGEPLIQREDD KPETVIKRLKAYEDQTKPVLEYQKKGVLETFSGTETNKIWPYV YAFLOTKVPQRSQKASVTP |
| 5617 | 176 | 765 | PWRGRGSRPRGAGAMABEQVNRSAGLAPDCEASATAETTSSVG TCEAAGKSEPEKDYDSTCVFCRIAGRQDPGTTELLHCENEDLICF KDIKPAATHHYLVVPKKHIGNCRTLRXDQVELVENMVTVGKTLIL ERNNFTDF ⁻ TNVRMGPHMPPFCSTISHLHLHVLAPVDQLGFLSKLV YRVNSYWFITADHLIBKLRT |
| 5618 | 3 | 1692 | YLN ⁻ YINLKSENKLSGKEDLWEKLQYLWKSTLNLPLEDLLRPDES LFLNSGGDSLKSIRLLSEIEKLVGTSVPGLEIILSSSILEIYN HILQTVVPDEDVTFKSCATKRKLSNINQEASGTSIHQKAIMT FTCHNEINAFVVL ⁻ SRGSQLSLNSTRLTKLGHCSACPSDSVS QTNIQNLKGLNSPVLIGKSKDPSCVAKVSEEGKPAIGTQKMEHL RWRS ⁻ DTGKCV ⁻ DASPLVVIPTFDKSTTVYIGSHSRMKA ⁻ VD ⁻ FY SGKVWEQILGDRIESSACVSKCENFIVVGCYNGLVVVLKSN ⁻ SG EKYWMFTTEDAVKSSATMDPTGLIYIGSHDQHAYALDIYRKKC VWKSCKGGTVFSSPCLNLI ⁻ PHHLYFATLGGLLLAVNPATGNVIV KHSCGKPLFSSPQCCSQYICIGCV ⁻ DGNLLCFTHFGEQVWFST GPIFSSPCTSPSEQKIPFGSHDCFIYCCNMKGHLQWKFTTSRV YATPFAFHNYNGSNEMLLAAASTDGKVVILESSQSGQLQSVYELP GEVFSSPVVLESMLIIGCRDNYVYCLDLLGGNQK |
| 5619 | 2160 | 1477 | DSEVLPTSGNVISTAQPAQWPAVEAALRSLGSPPGAGRCPCP AQLSHSHQLAAWDPLKPSLRSYPPHLLQHPQLRSLTASSGHLGR RSCPQPRPLEELLRAGSSTRPQPLTSSCCGMSCMYSFLGHCSVL LWG ⁻ TKGRGSGSPSSPGCCLHPPAQHSQDLPLVHV ⁻ DVGWQPP ⁻ LP TVGLRPLGLGERQRGALRAGDPQCQCLPATVREDLGVSPWAA ECSPPATP |
| 5620 | 930 | 182 | PLPPPTLAMFLTRSEYDRGVNTFSPEGRLFQVEYAIEAIKLGST AIGIQTSEGVCLAVEKRITSPIMEPSSIEKIVEIDAHIGCAMSG LADAKTLIDKARVETQNHWFYNETMTVESVTQAVSNLALQF EEDADPGAMSRPFGVALLFGGVDEKGPQLFHM ⁻ DPSGT ⁻ VFQCDAR AIGSASEGAQSS ⁻ LQEVYHKSMTLKEAIKSSLIILKQVMEK ⁻ LNA TNIELATVQPGQNFHMF ⁻ TKEELEBVIKDI |
| 5621 | 3 | 819 | VVEFVYTTATDANVKNESLSSVQQLGIKMTVRYGKFLSLLKDG ENDLTWVLKHCERFLKQQQTSIKSSLLCQGN ⁻ YAGHDW ⁻ FVSSLF MIMLGDK ⁻ KEKTFQFLHQFSRLITSAPLWLPRLH ⁻ ISSYLPND ⁻ TVES GIHPVYFCSTHYIEMLLKAEPLVFSAFHMSGFAPSQICLQWIT QCFFWNYLDWIEICHYIATCVFLGPDYQVYICIAVFKHLQDDILQ HTQTQDLQVFLKEEALHGFRVSDYFEYMEILEQNYRTVLLRDMR NIRLQST |
| 5622 | 1122 | 456 | AASTKDAVSRKRSHSASEKSGTGTSTISKRLNMNPQIRNPMKAMY PGTFYFQK ⁻ NLWEANDRNETWLCFTVEGIKRRSVVSWKTGVFRN QVDSETHCHABRCFLSWFCDDILSPNTKYQVTWYTSWSPCPDCA GEVAEFLARHSNVNLTIFTARLYYFQYPCYQEGRLSLSQEGVAV |

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|------------|--|--|---|
| | | | EIMDYEDFKYCWENFVYNDNEFFKPWKGLKTNFRLLKRRRLRESLQ |
| 5623 | 3 | 954 | FLPFFIRAPKISRNGQWLFTFTTPTFPFANKALPGWEGIVPACFW RKILTPSTGTMEQLQVTILFLLPSICSSNSTGVLEAANNLSLV TTTKPSITPNTESLQKNVVTPTTGTTPKGTITNELLKMSLMST ATPLTSKDEGLKATTTDVRKNDSIISNVTVTSVTLFNAVSTLQS SKPKTETQSSIKTTEIPGSVLQPDASPSKTGTLTSTIPVTIPENT SQSQVIGTEGGKNASTSATSRSYSSIIILPVVIALIVITLTVFVL VGLYRMCWKADPGTPENGNDQPDQSDKESVKLLTVKTIHSESGEH SAQGKTKN |
| 5624 | 159 | 898 | PGVAAAAGALPQYHGFAPALVSCRRELSLSAGSLQLERKRDRFT SSGSRKLYFDTHALVCLLEDNGFATQQAEEIVSALVKILEANMD IVYKDMVTQMKGITTEFQQVMSQIANVKKDMIILEKSEFSALRAE NEKIKLELHQLKQVMDEVIVKVRTDTKLDFENLEKSRVKELYSLN EKKLELRTEIIVALHAQQDRALTCTDRKIETEVAGLKTMLBESHK LDNIKYLKAGSIFTCLTVALGFIYRIWI |
| 5625 | 1 | 1180 | TFPSSAAQRAGFPAGALEALSPGGARAHAEERRGEMRATPLAAP AGSLSRKKRLBLDDNLDTERPVPQKRARSGPQERLPPCLLPLSPP TAPDRATAVATASRLGPVLLFPEEGGRAYQALHCTGTGTCTR VYPVQEALAVLEFYARLPPhKHVARPTEVLAGTQLLYAFFTRTH GDMHSLVRSRHRIPPEAAVLFROMATALACHQHGLVLRDLKL CRFVFADRERKKLVLENLEDSVLTGPDSDSLWDKHACPAYVGPE ILSSRASYSKGAADVWSLGVLFITMLAGHYFPQDSEPVLLFGKI RRGAYALPAGLSAPARCLVRCLLRREPAERLTATGILLHFWLRQ DMPPLAPTRSHLWEAAQVVPDGLGLDEAREEEGDREVLYG |
| 5626 | 3123 | 2011 | PPRALGVSAMENQVLTTPHYWAQRHRELYLRVELSDVQNPAISI TENVLHFKAQGHGAKGDNVYEFHLEFLLDKPEPVYKLTQRQVN ITVQKKVSQWVERLTKQEKRLPLFLAPDFDRWLDESDAEMELRAK EEERLNKLRLESEGSPETLTNLKGYLFMYNLVQLGFSWIFVN LTVRFCLIGKESFYDTFHTVADMMYFCQMLAVVETINAAIGVTT SPVLPSLIQLLGRNFILFIIFGTMEEMQNKAVVFFVFLWSAIE IFRYSFYMLTICIDMDWKVLTWLRYLWIPLYPLGCLAEAVSVIQ SIPIFNETGRFSFTLPYPVKIKVRFSFFLQIYLYLIMIFLGLYINF RHLYKQRRRRYQKKKKIH |
| 5627 | 3123 | 2011 | PPRALGVSAMENQVLTTPHYWAQRHRELYLRVELSDVQNPAISI TENVLHFKAQGHGAKGDNVYEFHLEFLLDKPEPVYKLTQRQVN ITVQKKVSQWVERLTKQEKRLPLFLAPDFDRWLDESDAEMELRAK EEERLNKLRLESEGSPETLTNLKGYLFMYNLVQLGFSWIFVN LTVRFCLIGKESFYDTFHTVADMMYFCQMLAVVETINAAIGVTT SPVLPSLIQLLGRNFILFIIFGTMEEMQNKAVVFFVFLWSAIE IFRYSFYMLTICIDMDWKVLTWLRYLWIPLYPLGCLAEAVSVIQ SIPIFNETGRFSFTLPYPVKIKVRFSFFLQIYLYLIMIFLGLYINF RHLYKQRRRRYQKKKKIH |
| 5628 | 75 | 1455 | VAGAMASKCLKAGFSSGSLKSPGGASGGSTRVSAMYS SSPCKLP SLSPVARFSACSGLGRSSYRATSCLPALCLPAGGFATSYSGG GGWFGGILTGNEKETMQSLNDRLAGYLEKVRQLEQENASLESR IREWCEQQVPYMCDDYQSYFRTIEELQKKTLC SKAENARLVVEI DNAKLAADDFTKYETEVSRLQLVESDINGLRRILDDLTLCKSD LEAQVESLKEELLCLKKNHEEVNSLRCQLGDRNLNVEVDAAPPV DLNRVLEEMRCQYETLVENNRDAEDWLDTQSEELNQOVVSSSE QLQSCQAEIIELRRTVNALEIELQAQHSMDALESTLAETEARY SSQLAQMQCMITNVEAQLAETRADLERQNEVQVLLDVRARLEC BINTYRGLLESEDSKLPNCPCADYSPSKSLCPLCPAASCGPSA ARTNCSARPICVPCPGGRF |
| 5629 | 2287 | 938 | GRPRSSSDNRNPLRERAGLSSAAVQTRIGNSAASRRSPAARPPV PAPPALPRGRPGTEGSTLSAPAVLVAVAVVVVVSAVAVAMA NYIHVPPGSPPEVPKLNVTVQDQEBHRCREGALSLLQHLRPHWDP QEVTLQLFTDGIITNKLIGCYVGNTEDEVVLVRIYGNKTELLVDR DEEVKSFRLQAHCAPQLYCTFNNGLCYEFIQGEALDPKHVCN PAIFRLIARQLAKIAHAHNGWIPKSNLWLKMGKYFSLIPTGF |

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|------------|--|--|--|
| | | | <p>ADEDINKRFLSDIPSSQILQEEETWMMKEILSNLSPVVLCHNDL LCKNIIYNEKQGDVQFIDYEYSGYNLAYDIGNHFNFEFAGVSDV DYSLYPDRELQSQWLRAYLEAYKEFKGCTEVTEKEVEILFIQV NQFALASHFFWGLWALIQAQYSTIEBDFLGYAIVRFNQYFKMKP EVTALKVPE</p> |
| 5630 | 1194 | 278 | <p>GFWAIAQTCAHHLPEPGSPWLVPASPWRLPEMSSFCYRRTLTVALE TLICCPGSDKVFVHVVRPKKLAVEPKGSLEVNCSTTCNQPEVG GLETSLDKILLDEQAQWKHYLVSNISHDITVLQCHFTCSGKQESM NSNVSVYQPPRQVILTLQPTLVAVGKSPTEICRVPTVEPLDSLTL LFLPRGNETLHYETFGKAAPAPQBATATFNSTADREDGHRNFSC LAVLDLMSRGGNIFHKHSAPKMLBIYEPVSDSQMVIIIVTVVSVL LSLFVTSVLCLCFIFGQHLRQQRMGTYGVRAAWRRLPQAFRP</p> |
| 5631 | 1053 | 290 | <p>SRVDDFVRPEPSRAEPSRSGRRRFPARRAATMSVFGKLFAGGGGK AGKGGPTPQEAIRLRDTEEMLSKKQEFLEKKIEQELTAAKKHG TKNKRAALQALKRKKRYEKQLAQIDGTLSTIEFQREALENANTN TEVLKNMGYAAKAMKAHDNMDIDKVDLMQDIADQQELAEIS TAIKSPVGFGEFDEDELMAELEEELEQELDKNLEISGPEITVP LPNVPSIALPSKPAKKKEEDDDMKELENWAGSM</p> |
| 5632 | 3 | 952 | <p>VVLGWSPPRRLWWSGLGAORPAVPVSGLARSLHVTERRPHRRA SVRVARGRLGVWAQPPQLLPRPVGSRRRMQPPGPPPAYAPTNGD FTFVSSADAEDLSGSIASPDVKLNLGDFIKESTATTFLRQRGY GWLLEVEDDDPEDNKPILLELDIDLDKIYYKIRCVLMPMPSLGF NRQVVRDNPDPFWGPLAVLVFFSMISLYGQFRVWSWITIIWIFGS LTIPLLARVLGGEVAYGQVLGVIGYSLPLIVIAPIVLLVVGSGFE VVSTLIKLFVFWAAYSAASLLVGEEFKTKKPLLIYPIFLLYIY FLSLYTGTV</p> |
| 5633 | 771 | 460 | <p>QGCSKTMSVGRPFYRSSEFMEQLLSSHLHQVFFCCFTVVCLEN CLFENSVSCLYMLCFNFFMSIFFYSLSTIKLNLIIYLWGLSYQSL LLLLLSGHRPWGSSMV</p> |
| 5634 | 1446 | 855 | <p>PRATGRIRSRRAASRPACAGASGAEPRSGRERSRLSGRRAPAM ARNTLSSRRFRVDIDEFDENKFVDEQEAAAAAAEPGDPDPSEVD GLLRQGDMLRAFHAALRNSPVNTKNQAVKERAQGVVLKVLTNFK SSEIEQAVQSLDRNGVDLLMKYIYKGFEPKTENSSAVLLQWHEK ALAVGGLGSIIRVLTARKTV</p> |
| 5635 | 3 | 943 | <p>DRGPRSTATDTGRARVSFWRFPLDPGVKNSNVQISGEKRRFRTL RSLFHPFPVTRSCAPRAVLVGSSWPAKMVAPAVKVARGWGSLAL GVRRAVLQLPGLTQVRWSRYSEFKDPLIDKEYYRKPVHEELTEE EKYVRELKKTQLIKAAPAGKTSSVFEDPVISKFTNMMIGGNKV LARSLMIQTLEAVKRKQFEKYHAASAEBOATIERNPYTIFHOAL KNCEPMIGLVPILKGGRFYQVPVPLPDRRRRFLAMKWMITECRD KKHQRTLMPEKLSHKLLEAFHNQGPVVKRKHDLHKMAEANRALA HYRWW</p> |
| 5636 | 2253 | 1143 | <p>LEDTICQHPPAEKKLYLYHRKLREVERNGIPRLPKDVFMDTHQG LTDVRAKVTGTFSEGVDSVKGGFSSFSQATHSAGAVVSKPREI ASLIRNKFGSADNIPNLKDSLEEGQVDDAGKALGVISNFQSSPK YGSEEDCSSATSGSVGANSTTGIAVGASSKTNLDMQSSGFD ALLHEIQEIRETQARLEESFETLKEHYCRDYSLIMQTLQEERYR CERLEEQLNDLTELHQNEILNLKQELASMEEKIAYQSYERARDI QEALACQTRISKMELOQQQQVQLEGLEENATARNLLGKLINI LLAVMAVLLVPVSTVANCVVPLMKTRNRTFSTLFLVVFIAFLWK HWDALFSYVERFFSSPR</p> |
| 5637 | 948 | 2532 | <p>MSFCGARANAKMMAAYNGGTSAAAAAGHHHHHHHHPHLPPLPHL HHHHPQHLLHPGSAAVHPVQOHTSSAAAAAAMNLPNG QQQPYFFSPAPGQAPGPAAPAAQVQAAAAATVKAHHHQHSHHP QQQLDIEPDRPIGYGAFGVVSVTDPRDGKRVALKKMPNVFQNL VSCKRVFRELKMLCFKHDNVLSALDILQPPHIDYFEEIYVVTE LMQSDLHKIIVSPQPLSSDHVKVFLYQILRGLKYLHSAAGILHRD IKPGNLLVNSNCVLKICDFGLARVEBLDESRHMTQEVVTQYYRA PEILMGRHYSNAIDIWSVGCIFAEELLGRRIILFQAQSPIQQLDL ITDLLGTPSLEAMRTACEGAKAHILRGPHRQPSLPLVLYTLSSQA</p> |

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|------------|--|--|--|
| | | | THEAVHLLCRMLVFDPYKRISAKDALAHFVLDDEGRRLRYHTCMCK CCFSTSTGRVYTSDFEPVTNPKFDDTFEKNLSSVRQVKEIIHQF ILEQQKGNRVPLCINPQSAAFKSFISSTVAQPSSEMPSPPLVWE |
| 5638 | 125 | 1155 | DRKMSELDQLRQAEQLKNQIRDARKACADATLSQITNNIDPVG RIQMRTRRTLGRHLAKIYAMHWGTD SRLLVASQDGLI IWDSY TTNKVHAIPLRSSWVMTCAYPAGSNVYACGGLDNICS IYNLKTR EGNVRVSRELAGHTGYLSCCRFLDDNQIVTSSGDTTCALWDIET GQQTTFTHGHTCDVMSLSLAPDTRLFVSGACDASAKLWDVREGM CRQFTTGHESDINAI CFFPNGNAFATGSDDATCRLFDLRADQEL MTYSHDNIICGITSVSFSKSGRLLLAGYDDFNCNVWDALKADRA GVLAGHDNRVSCLGVTDDGMAVATGSDWSFLKWN |
| 5639 | 125 | 1155 | DRKMSELDQLRQAEQLKNQIRDARKACADATLSQITNNIDPVG RIQMRTRRTLGRHLAKIYAMHWGTD SRLLVASQDGLI IWDSY TTNKVHAIPLRSSWVMTCAYPAGSNVYACGGLDNICS IYNLKTR EGNVRVSRELAGHTGYLSCCRFLDDNQIVTSSGDTTCALWDIET GQQTTFTHGHTCDVMSLSLAPDTRLFVSGACDASAKLWDVREGM CRQFTTGHESDINAI CFFPNGNAFATGSDDATCRLFDLRADQEL MTYSHDNIICGITSVSFSKSGRLLLAGYDDFNCNVWDALKADRA GVLAGHDNRVSCLGVTDDGMAVATGSDWSFLKWN |
| 5640 | 280 | 1092 | QQGKNTMLSHNTMMKQRKQQAATAIMKEVHGNDVDGMDLGKKVS IPRDIMLEELSHLSNRGARLFKMRQRSDKYTFENFYQSRQAI NHSIAMQNGKVDGNSLEGGSQQAPLTPNTPDPRSPNPNDNIAP GYSGPLKEIPPEKFNNTAVPKYQSPWEQAISNDPELLEALYPK LFKPEGKAEPLDYRSFNRVATPFGGFKASRMVKFKVPDFELLL LTDPRFMSFVNPLSGRRSFNRTPKGWISENIPIVITTEPTDDTT VPESEDL |
| 5641 | 27 | 332 | CRHNCNGDVKLLSNQMDKLF AFHLLFTFHGLLHFLDGSIQKLIQA EIILSDNSSILVLENNFLFKVSKQFIHLIAKKFYISITIVSAS NGESFVLSMIVTG |
| 5642 | 199 | 1247 | ITPCRMDFLVLFYFLASVLMGLVLICVCSKTHSLKGLARGGAQ IFSCI IPECLQRAMHGLLHYLFHTRNHTFIVLHLVLQGMVYTEY TWEVFGYQCELELSLHYLLLPYLLLVNLFFFTLTCTGNTNGIIT KANELLFHLYVEFDEVMPKPNVRCSTCDLRKPARSKHCSVCNWC VHRFDHHCVVNNCIGAWNIRYFLIYVLTLTASAATVAIVSTTF LVHLVMSDLYQETIYIDDLGHLHVMOTVFLIQYLFLLTFPRIVFM LGFVVVLSFLLGGYLLFVLYLAATNQTTNEWYRGDWAQCRCPL VAWPPSAEPQVHRNISHHGLRNLQEIFLPAPFCHERKKQE |
| 5643 | 1 | 847 | PSGCVRDVETRGPGRSRAARGPRVMMERRGVGAGAIKKKLAERK YKERGTVAEDQLAQMKSQQLDMFKTNLEEFASKHKQEIIRKNPEF RVQFQDMCATIGVDPLASGKGFWSEMLGVGDFYYELGVQIIEVC LALKHRNGGLITLLEELHQVQLKGRGKFAQDVSQDDLIRAIKKLK ALGTGFGIIPVGCTYLIQSVPAELNMDHTTVVLQLAENKGYVTVS EIKASLKWETERARQVLEHLLKEGLAWLDLQAPGEAHYWLPAIF TDLYSQEITABEAREALP |
| 5644 | 83 | 1138 | PRRMGSVQLITSVGVQONHPGWTVAGQFQEKRRFTEEVIEYFQ KKVSPVHLKILLTSDEAWKRFVRVAELPREEADALYEALKNLTP YVAIEDKMQKEQQQFREWFLKEFPQIRWKIQESIERLRVLANE IEKVHRGCVIANVVSGSTGILSVIGVMLAPFTAGLSLSTAAAGV GLGIASATAGIASSIVENTYTRSABLTASRLTATSTDQLEALRD ILHDITPNVLSFALDFDEATKMIANDVHTLRRSKATVGRPLIAW RYVPINVVETLRTGAPTRIVRKVARNLGKATSGVLVVDVNNL VQDSDLHKGKSESASELLROWAQELENLNLTHIHQSLKAG |
| 5645 | 537 | 799 | VQSVRDILKRLSPDTPPGDSGNRDVTRDPVTGPLNSASSQVPTL YLCLQNSLLGHSSVEDARATMELYQISQIRARRGLPRLAVSD |
| 5646 | 3745 | 3328 | AEQYGTSPHLLPTMLLSSCLPPANVTTKAATPPPLVLSLTADF AGKPAPCRVTLTLRLASIPATKRASFLSSFIKMFEELEYILGF LSLLLKPHVHVSVYSAICHFQKEGTGNSRSFTCTPELFPRLQTHL RAEGGAQ |
| 5647 | 288 | 800 | GVIMATSELSCEVSEENCERREAFWAEWKDLTLSTRPEEGCSLH EEDTQRHETIYHQGQCQVQLVQRSPWLMMRMGILGRGLQEQVLPY |

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|------------|--|--|---|
| | | | QRVLPPIFTPAKMGATKEEREDTPIQLQELLALLETALGGQCVD RQEVAEITKQLPPVVPVSKPGALRRSLRSMSQEAQRG |
| 5648 | 7 | 1518 | VLSELGCRHEALREVGAEWFPPTCSPNICSGLQQAGNTDWSLTM APQSLPSSRRMAPLGMMLGGLMAACFTFCLSHQNLKEFALTNPEK SSTKETTERKETKAEELDAEVLEVPHPTHEWQALQPGQAVPAGS HVRNLQOTGEREAKLQYEDKFRNNLKGKRLDINTNTYTSQDLKS ALAKFKEGAEMESSKEDKARQAEVKRLFRPIEELKKDFDEINNV IETDMQIMVRLINKFNSSSSSLEEKIAALPDLEYVYVHQMNAQD LLSFGGLQVVINGLNSTELVKYAAAFVLGAASFSSNPKVQVEAI EGCALQKLLVILATEQPLTAKKKVLFALCSLLRHFFPYAQRQFLK LGGLQVLRITLVQEGKTEVLAVRVVTLVLDLVTEKMFEEAEIT QEMSPEKLQYRQVHLLPGLWEQGWCEITVHLLALPEHDAREKV LQTLGVLLTTCRDYRQDPQLGRTLASLQAEYQVLASLELQDGE DEGYFQELGVSNSLLKELR |
| 5649 | 1172 | 3006 | MLQEQQLDAINEETIRMIQEEKESTELRAEEIETRVTSGSMEALNL KQLRKRGSIPTSLTDLASASAPPLSGRSTPKLTSRAAQDLDR MGVMTLPDLRKHRRKLLSPVSRREENREDKATIKCETSPSSPR TLRLEKLGHPALSQEEGKSALEDQGSNPNSSSSSSQDLSLHKGAKR KGIKSSIGRLFGKKEKGRLLIQLSRDGATGHVLLTDSEFSMQEPM VPAKLGTOAEKDRRLKKKHQLEDDARRKGMPPAQWDGPTVVSWL ELWVGMPAWYVAACRANVKSGAIMSALSDTEIQREIGISNALHR LKLRLAIQEMVSLTSPSAPPTSRSTSSGNVWVTHEEMETLETSTK TDSEEGSWAQTLAYGDMNHEWIGNEWLPGLGLPQYRSYFMECLV DARMLDHLTKKDLRVHLKMVDSFHRTSLQYGINCLKRLNYDRKE LEKRREESQHEIKDVLVWINDQVHVWQSIGLRDYAGNLHESGV HGALLALDENFDHNTLALILQIPTONTQARQVMEREFNLLALG TDRKLDGDDKVFRRAPSWRKRFPRREHHGRGGMLSASAEITLPA GFRVSTLGTLPAPPAPPKIMPEAHSHYLYGHMLSAFRD |
| 5650 | 1172 | 3006 | MLQEQQLDAINEETIRMIQEEKESTELRAEEIETRVTSGSMEALNL KQLRKRGSIPTSLTDLASASAPPLSGRSTPKLTSRAAQDLDR MGVMTLPDLRKHRRKLLSPVSRREENREDKATIKCETSPSSPR TLRLEKLGHPALSQEEGKSALEDQGSNPNSSSSSSQDLSLHKGAKR KGIKSSIGRLFGKKEKGRLLIQLSRDGATGHVLLTDSEFSMQEPM VPAKLGTOAEKDRRLKKKHQLEDDARRKGMPPAQWDGPTVVSWL ELWVGMPAWYVAACRANVKSGAIMSALSDTEIQREIGISNALHR LKLRLAIQEMVSLTSPSAPPTSRSTSSGNVWVTHEEMETLETSTK TDSEEGSWAQTLAYGDMNHEWIGNEWLPGLGLPQYRSYFMECLV DARMLDHLTKKDLRVHLKMVDSFHRTSLQYGINCLKRLNYDRKE LEKRREESQHEIKDVLVWINDQVHVWQSIGLRDYAGNLHESGV HGALLALDENFDHNTLALILQIPTONTQARQVMEREFNLLALG TDRKLDGDDKVFRRAPSWRKRFPRREHHGRGGMLSASAEITLPA GFRVSTLGTLPAPPAPPKIMPEAHSHYLYGHMLSAFRD |
| 5651 | 646 | 1869 | ARQQQRQFWG*EAKAKGPASESPRV*EGSGWEGPASP*TPGSTL AWGEGAGIR*ASGLTAAGAASAAAA/PPPTRGGPAPAGCGRAPP WPAPLRVPTHGRAPAPRSRAAPRALSHGTAAALSPASPAGP ADP*LPQHSSQSPPRG*RWGRSRSAPAPAHPEHPAPAGSASASQ QTPGWPGSCCLAQGWQAEPLGAPGAEDG\VPVPPQRGFPLGTLS FAGSWAGLAGYG*AGAPGTQATAPRAAGQTFVAAAPNCRV*GSA FALHRAPAAADPGSPQAPPAWASPAAGPGLSSSDYCGGLGA GWRAGISPELLGAAGLSDNWARCPGPGPAB*GGQPGCRITPASA CMPSPPPVEGSLGLSRKGHGLPSQAR*GWEECRRARHLVPLPRL LGPRGRTGPRSSPS |
| 5652 | 735 | 343 | HHKKYQHIHQKSFSCPEPACGKSFNFKHLKEHMKLHSDTRDYI CEFCARSFRTSSNLVIHRRITHTGEKPLQCEICGFTCRQKASLNW HQRKHAETVAALRFPCFECGRFEPKPDSSVAHRKSHPALLLA |
| 5653 | 66 | 1401 | RGRISQSRGRLTLGLVLLLDILGARQHQQRVSHCWKGGFLTAPL CFPQPCQPGTRRRGRRLKEATEPQLAMAEFVTLKDVGMDFTL GDWEQLGLEQGDTFWDTALDNCQDLFLDDPPRPNLTSHPDGSED LEFLAGGSPEATSPDVTEIKNSPLMEDFFEEGFSQEI/SRDVQI GWLLBLQFRRLYRGHLVR*FARRSRKSSEV*YCHQRGKSHGMQ |

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|------------|--|--|---|
| | | | ES*IKERTQSCVHRFRHGRFRFH\DNVSEKTLTPAKSKEYRGEFF SYSDHSQQDSVQEZKPYQCCEGKSPSGSYRLTQHWITHTREK PTVHQECEQGQFDRKASHSGYPKTHGTGYKFCVNEYGTFFSQSTY LWHQKTHAGEKPKCSQSDSDHPPSHDTQSGEHQKTHDTSKSYCN ECGKAFTRIFHLTRHQKIHTKRYECSKCQATFNLRKHLIQHQK THAANV |
| 5654 | 3 | 598 | TLPLFPGRFRGWRRCGAVAARKNSTGCVNSINQRRDSVRMSAL NWKPFVYGGGLASITACGTFPIDLTTRFQIQGQINDAKFKEII YRGMHLALVRIGREGLKALYSG*VGLHAFCHCSLPHMGIDFR PRLHRSQVKSRLCV*KEQIA**/MFSLLISTLISKYIYYAADVL EKLFFYIIQVQTDNNKKICLFKNI |
| 5655 | 2 | 867 | RPPGIRAPRQLHBAAGRRPDASARPRTRPTVLLHDFQLSFPPP PLSYPSVFPFAVARVLPQRSQDYRAAGMPQLSGGGGGGGDPELC ATDEMIPFKDEGDPQ\REKIFAEIVNPEEEGLADIKSSLVNES EIIIPASNGHEVARQAQTSQEPYHDKAREHPDDGKHDPDGLYKNG PSYSSSYSGYIMPMNMNDPYMSNGSLSPPIPRTSNKPVPVQPSH AVHPLTPLITYSDEHSPGSHPSHIPSDVNSKQGMRSRHPAPDI PTFYPLSPGGGGQITPLGQQQP |
| 5656 | 228 | 1066 | PRVFPLEFASGPGGAFFHSGRLQRSILTKDSAGCFSQCRSRAM LVLRSGLTKALASRTLAPQVCSSFATGPRQYDGTIFYEFRTYYLK PSNMNAFMENLKKNIHLRTSYSELVGFWSVEFGGRTNKVFIWK YDNFPHRAEVRKALANCKEWOQSIIIPNLARIDKQETIITYLIP WSKLQKPPKEGVYELAVFQMKPGGPALWGDATERAINAHVNLG TKVVGVFHTYEGELNRVHVLWNESADSRAAVRHKSHEDPISWG GVRESVNYL\VSQQNM |
| 5657 | 105 | 1052 | GQRLQSPRVQMPVQPPSKDTEEMEAEAGDSAABMNGEESEER SSGQTESEEESEEMDEYERRRSECVSEMLDLEKQFSELKEXL FRERLSQLRLRLLEEVAERAPYEYTEPLGGLQRLKIRIQVAGIY KGFCLDVIRNKYCELOQAKOHLSEKLLLYDTLQGELOBRIRQ LEEDRQSLDLSSEWDDKLHARGSSRSWDSLPPSKRKKAPLVSG PYIVYMLQEIDILEDWTAIKKARAASVPOKRKSD\DLDPVHVSQ GGPQSSWHCTQDSRLPPADRRTHRPLRVCPARLLWCCWALPLHL ALVWTPPL |
| 5658 | 2346 | 3541 | TERRVYNPWPEDPD\CIQEDPWNLPNSIKTLVDNIQRYVEDGK NQLLLALLKCTDTLQLRRDAIFCQALVAACVTFSEQLAALGY RYNNNGEYEESSRDASRKWLEQVAATGVLLHCQSLLSPATVKEE RTMLEDIWVTLSELNVTFSFKQLDENYVANTNVFYHIEGSRQA LKVIYFLDSYHFSKLPRLBGGASLRHLTALFTKVLNVVGLPS PGSQAEDLQDDINAQSLEKVQYRKLRAFYLERSNLPIDAST TAVKIDQLIRFINALDELCLRMKSFVHPKPGAAGSVGAGLIPIS SELCYRLGACQVMCGTGMQRSTLSVSLQAAAILARSHGLLPKC IMQATDIMRKQGPVVEILAKNLRVKDQMPQAGAPRLYRLCQPKMN GDL |
| 5659 | 2 | 696 | WKRSGEVS PKGELGAWRGNSGRPKTIGRAAEAEENEDRTLGRLLP GNERSQPRSPRLRLAPQLKAEAAADKGLA?VPPPFSSGHSQGPC\ EREGEGQGRGRSRRGAHLELKPSPLRAGAPTDRGRGGA?EVA AAGGRMVQKESQATLEERESELSNPAASAGASLEPPAAPAG EDNPAGAGG\AAVAGAAGCARRFLCGVVEGFYGRPWVMBQRKEL FRRLQKWE LNTYL |
| 5660 | 229 | 853 | PVTMWAFSELPMPELLNLIVSLGFGVATVTLIPAFRGHFTIARL CGQDLNKTSRQOIPESQGVISGAVFLIILFCFIPFPFLNCFVKE QRKAFPHHEFVALIGALLAICCMIFLGADDVNLNRWRHKL LPTAASLELLMVYFTNFGNTTIVVPKPFPRPILGLHLDLGR*SYHCC PYGTYFREPLVLHILLQVFLFCLCVFPDPFW |
| 5661 | 2 | 473 | LNLYSPSCGGIPKLPGLPREAAAALGASFLAEAPLPVTVRSGSL AGMAVTCDPKAFLSICFVTLVFLQLPLASICQ*GTDSCASRGK ADFDVTGPHAPILAMAGGHVELQCQLFPNISAEDEMLRWYRCQP SLAVHMHMERGMMDGEGQKWYRGRT |
| 5662 | 2 | 1318 | LRKEGRCRRGNSNRGVWAAPAEGLGGRGMLGVRCLLRSVRFCSSA PFPKHKPSAKLSVRDALGAQNASGERIKIQGWIRSVRSQKBEVLF |

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|------------|--|--|--|
| | | | LHVNDGSSLESLOVVADSGLDSELTFGSSVEVQGLIKSPSKR QNVELKAEKIKVIGNCDKDFPIKYKERHPLEYLRQYPHFR CRT NVLGSILRIRSEATAAHSFFKDSGFVHIHTPIITSNDSEGAGE LFGLEPSGKLKVPENFFNVPAFLTVSGQLHLEVMSGAFQTQVFT FGPTFRAENSQSRRLAEFYMIABEISFVDSLQDLMQVIEELFK ATTMVLKSKCPEDVELCHKFIAPGQKDRL*HMLKNNFLIISYTE AVELKQASQNFPTFTPEWGADLRTEHEKYLKHCNIPVFINY PTLTKPFYMRDNEGDPQEGESVA*HSLGLMILLSIVVIGQP |
| 5663 | 119 | 698 | PADIGRSTAKTPGPPRSLEMDPRYGMCPKLGASGCGAERSLL VQSYFEKGLPLTRFDVAIEFSLEEWQCLDSAQQLYRKVMLENYR NLVFLGIALTKPDLITCLEQGKEPWNKRHEMVAKEPVICSHFP QDLWAEQDIKDSQEAALKKYKYGHANFQLQKCKSVDECKVH KEHDNKLNQCLIPKTKK |
| 5664 | 118 | 572 | SLSMESNHKSGDGLSGTQKEAALRALVQRTGYSLVQENGQRKYG GPPPGWDAAPPERGCEIFIGKLPDLFEDELIPCEKIGKIYEM RMMMDFNGNNRGYAFVTFSNKVEAKNAIKQLNNYBIRNGRL LGV CASVDNCRFLVGGIPKTKK |
| 5665 | 347 | 702 | VVQHLIILLHCERTSPAMITSELPVLQDSTNETTAHSDAGSELE ETEVKGKRRGRPRPPTNKKPRKSPGEKSRIEAGIRGAGRGR ANGHPQQNGEGEPVTLFEVVKLGKSAHQRC |
| 5666 | 213 | 540 | VSCLPSTCKMITLNNQDQVPFNSSHPEYKIAALVFYSCIFII GLPVNITALWVPSCTTKKRTVTIIMYNVALVDLIFIMTLPPFRM FYYAKDEWPFGEYFCQILGA |
| 5667 | 1 | 695 | HPLPSASLGLPSVSLGVSLCVRSALEAVVPMPLKRRRARVGSF SGDAASSTPPSTRFPGVAIYLVPRMGRSRAFLTGLARSKGFR VLDACSSEATHVMEETSAAEAVSWQERRMAAAPPGCTPPALLD ISWLTESLGAGQFPVPECRHRLEVAGPSKGPLSPAMMPAYACOR PTPLTHTHTGLSEALELAEAGFEGSEGRLLTFCRAASVLKAL PSEVTTLSQLQ |
| 5668 | 691 | 894 | CSFLFCIPDLFLQFLGRKEEAAVLVGCWSPSLDGLDPQADPQ VLVRTAIRCAQQTGIDLSGCTKW |
| 5669 | 407 | 1 | DSCAPEGLSPLMSTQEGLSMHAHFQAYTFFIYLHARKRRGEIGD ADSRFNDRYAHKSAQLYFLYFVCWIFQDVYFTIKEKNEFFFPK ARGAPTKYSGSPIGSPTTTTPTTRPPSFNLHPAPHLASMLQKL NSQ |
| 5670 | 3 | 373 | SSECLTMAWIPLLLPLILCTVSVASYELAQFSSVSVPQGTAK ITCSGDVLAKKYARWFQKPGQAPVLVIYKDTERPSPGIBERFSG STSGTTVTLTISGAQVEDADYFCYSATDNFLWVF |
| 5671 | 280 | 524 | KFPFKTTPPHLGMSAITLWQFLQLLDQKHEHLICWTSNDGE FKLLKAKKVAKLWGLRKNKTNMNYDKLSRALRLLFMT |
| 5672 | 2 | 557 | FVPATPDPGVNLPPSRDPAMAKRSSLYIRIVEGKNLPAKIDTGS SDPYCIVKVDNEPIIRTATVWKTLCFPWGEYQVHLPPTFHAVA FYVMDEDALSRDDVIGKVCCLTRDTIASHPKGKFLSPSHTGLPSP WPPSHSETSPIGSVWSPAQKPFLLSPEAGATFCTPGLCSAACS QAWLLPLP |
| 5673 | 327 | 696 | ITVADQISHWSAGRIKNRTRIPECIHSSAATTLAGPHTMEGESV KLSSQTLIQAGDDEKNQRTITVNPAMMGKAFKVMNELRSKQLLC DVMIVADVEIEAHRVVLAACSPYFCAMFTGDMS |
| 5674 | 17 | 984 | GGGSMGEGESTAVLSGFVLGALAFQHLNTDSDTGFLLEGEVKEA AKNSITDSQMDDEVVYITIDIKYIPCYQLFSFYNSSGEVNEQA LKKILSNVKNVVGWYKFRHSDQIMTFRERLLHKNLQEHFSNQ DLVFLLLTPSITTESCSTHRLHSYKPKQXGLFHRVPLVVANLG MSEQLGYKTVSGSCMSTGFSRAVQTHSSKFEEDEGSLKEVHKIN EMYASLQEEELKSICKKVEDSEQAVDKLVKDVNRLKREIEKRRGA QIQAAAREKNIQKDPQENIFLCQALRTFFPNSEFLHSCVMSLKID MFLKVAVTTTTISM |
| 5675 | 80 | 753 | EGSRRGPTRLARLSARAGRLHFPFGSSRLIHFRGVSECRPPG KSGVPVSAAGSDGKWWERPGMFSMLASCCGWFKRWREPVKVT LLMVGLDNAGKTATAGIQGEYPEDVAPTGVGFSKINLRQKGFV TIFDLGGGIRIRGIWKNYYABSYGVIFVVDSSDEBERMEETKEAM |

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|------------|--|--|--|
| | | | SEMLRHRPRISGKPFILVLANKQDKEGALGEADVIECLSLKLVNE HKCL |
| 5676 | 2 | 930 | FVSSPPPRPVQPARPGCGFGLSCRRSLLCQVASTFAHVGVMRSPV RDLARNDGEEESTDRTPLLEPGAPRAEAAPVCCSARYNLAILAFPG FFIVYALRVNLSVALVDMVDSNTTLEDNRTSXACPEHSAPIKVH HNQTGKKYQWDAETQGWILGSFFYGYITQIPGGYVASKIGGKM LLGFGILGTAVLTFTPIAADLGVGPILVLRALGLEGLGEGVTTPA MHAMWSSWAPPLERSKLLSISYAGAQLGTIVISLPLSGIICVYMN WTYVYFFGTIGIFWFLWIVLVS DTPQKHKRISHYEKEYILSS L |
| 5677 | 1 | 1028 | PPRDGFLELRRLSVPLCSGFCPLTSLSRQGERSGGHLVAAAARAA VTATHPLPLAPLAVCQSVKSPAACQVRPRPRAVALPAALGGP GRSLPGLTAATMSSFSESALKKLSELSNSQSVQTLSSLWLH H RKHAGPIVSVWHRELKAKSNRKLTFLYLANDVIQNSKRKGPEF TREFESVLVDADFHVAREADEGCKKPLERLLNIWQERSVYGGEF IQQLKLSMEDSKSPFPKATEEKKSLKRTFQQIQEEEDDDYPGSY SPQDPSAGPLLTEELIKALQDLENAAGDATVRQKIASLPQEVQ DVSLEKITDKEAARLSKTVDEACLRNRGPGTS |
| 5678 | 3 | 593 | SSSPSSSTPSIPLFFYLLGQLRLQLLWGTALHSGAGEAAPCPG GSGRTAAPRTRADPAAQSLMIMNMKNFKRRFSLSVPRTEETEE SLAEFTQFNQLHNRNENLQLGPLGRDPPQECSTFSPDTS GEE PGQLSPGVQFQRRQNRRFSEMEVRASGALPRQVAGCTHKGVHRR AALQPD FVSKRLSLPMDI |
| 5679 | 2 | 623 | LNSRVDDFVAVPGAIMDEDDYGSAAEWGDEADGGQEDDSGEGE DDAEVQCECLHKFSTRDYIMEPSIFNTLKRYPQAGGSPENVIQL LSENYTAVAQTVNLLAEWLIQTGVPEPVQVQETVENHLKSLIKH FDPKADSI FTEEGETPAWLEQMIAHTTWRDLFYKLAEAHPDCL MLNFTVKVGRVLELRKVFMMNVYFWLLVCFL |
| 5680 | 258 | 592 | RRITSTSEKLQNRNHSHTPLESLIHPQPSYKGFIMFGKKKKKTE ISGSPNFEHRVHTGFDPEQKFTGLPQQWHSLLADTANRPKPMV DPSCITPIQLAPMKTIIVRGNKPC |
| 5681 | 45 | 869 | LLCAKTLGVRTKESQAEGYNRSGINNHQAEDPRFCPSFCWMRSA RQTRPQRLRKEAARPPTPGSCPGGTGMDGKKCSVWMFLPLVFTL FTSAGLWIVYFIAVEDDKILPLNSAERKPGVKHAPYISIA GDDP PASCVFSQVMNMAAFLALVAVLRFIQLKPKVLNPNLNLISGLVA LCLASFGMTLLGNFQLTNDSEIHNVTSLTFGFGTLTCWQAAL TLKVNLIKNEGRRVGIPRVILSASITLCVGPILLHPGPKHPHVC S QGEPVPGHVL |
| 5682 | 39 | 622 | PSRSLGTMRKWRHREVNLPVTTQQDAVCPAPIPSPGLSAQTGL QKIWGTIHCQVCPGAPAWPGSPWHEEMGLLLVPLLLPGSYGL PFYNGFYYSNSANDQNLGNHGGKDLLNGVKLVVETPEETLFTYQ GASVILPCRYRYEPALVSPRRVRVKKWKLSENGAPEKDVLAIG LRHRSFGDYQGRVHLRQD |
| 5683 | 89 | 778 | GSCGATALITRCLAWSVLISRLAMATYTCITCRVAFRDADMORA HYKTDWHRYNLRKVASMAPVTAEGFQERVRAQRAVAEBESKGS ATYCTVCSKKFASFNAENHLKSRHVELEKKAVQAVNRKVEEM NEKNLEKGLGVDSVDKDAMNAIQQAIAKQPSMSPKKAPPAPAK EARNVAVGTGGRGTHDRDPSEKPPRLQWFEQQA KKLAKHSEDD SEDEEHDLC |
| 5684 | 195 | 577 | TWCFRGYLGPRVIMKALDEPPYLTVGTDVSAKYRGAFCEAKIKT AKRLVKVKTFRHDSSTVEVQDDHIKGPLKVAIVEVKNLDGAY QEAVINKLTDASWYTVVFDGDEKTLRRSSLCLKGERHFAESET LDQLPLTNPEHFGTPVIGKKTNRGRRYE |
| 5685 | 779 | 1262 | LLLQQPVVHCFLLFPFREFSHHMITPGPPGPHHTTGIPHPAIVTPQ VKQEHPTDSLMHVKPOHEQKQEPKRPHIKKPLNAPFLMYK EMRANVVAECTLKESAAINQILGRRWHAHSREEQAKYVELARKE RQLHMQLYPGWSARDNYVSPSSIPVALHS |
| 5686 | 128 | 1181 | CTWWQVNTITLIDINDNHTWKDAPYYINLVEMTPPDSVDTTVVA VDPDLGENTLVYSIQPPNKFYSLNSTTGKIRTTAMLDRENPD PHEAELMRKIVSVTDCGRPPLKATSSATVFVNLLDLNDNDPTF |

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|------------|--|--|--|
| | | | QNLDFVAEVLLEGIPAGVSIYQVVAIDLDEGLNGLVSYRMPVGMF RMDFLINSSSGVVVTTTTELDREERIAEYQLRVVVASDAGTPTKSST STLTIHVLVDNDETPTFFFAVYNVSVSEDPVR\GSGWSG*AARN NDVGLNAELSYFITGGNVGKFSVGVYRDAVVRTVVGLDRETTAA YMLILEAIDNGPVGKRHTGTATVFVTVLDVNDKRPILQSSYV |
| 5687 | 17 | 917 | AAPPAPPDG/PPP/PPPAPPT/PGPAA/APASSCQPRLSAGRAA QGGGGAAGVHVLVVPVAVGPRVNPGLQTPVPRPELLPGP\SSS LHSDSSYPDAGLSDDEPPDASLPDPPLTVP/ADA/PMPT SGCRMPSTASAE/AAGGQGACTHAKGSETPPPASPTSEAPASP LPHLTGGPGMYSSEAKLPNSFSCLAGAGTGAGI*GTASAHGTG PPVLPVHVCTPSLANPQP\AVGPEASSLPFGVSGIGMSA/SAPIS SSPFVAIGSCWLRGIPPPGSGFLCPGRAPGPVPIITHGQGGQGP VLDI |
| 5688 | 1 | 420 | LTKWDLFGNCYRLKKTGIEHGAMPEQGVVWYS/CLYDSRKLF *SHMIIRSL*KVDDSLGQLPLRELL*LNVIDRCIILAY LRVEKTFATYLNKFTVKVDFSLGELPLISMAAILKLWIMKID DGYIPAVF |
| 5689 | 1504 | 3 | HELSGKIHSMVSGNTCNWHPGGHS PGGGGQGEITSKDRGIPAL IWA/RKPIGTWTATKPTHRAG*GGAEEYQPPFQPCGPRSTSRG GEG*GHAVGPGREIGKEGSLPFLGPKALGF*SASCQRAFEAGAH GSTARKPAPATPGTRHPTMETREVAQGWPGAPRSQFWDQHPHS PGEHRPSG\SPLEACPRAWPKAGAVASATGTG\QPLPGSRGKQ KLERTREPPLLQAGWAVRKPWSEAKEGLGQAGRPSGMDSSAS PQTPGGRGSLEWGLPLYLGPHHVK*RSRLG*PP*GGQGGGH GAPSTPGPGGEAW*LPQOTSREKPGQAY*GE\GSPGLQCPCSK EL*RVPPGSLGPSTQCMYPTDKHS\GGADAQLEVSTAGSRSTF GQELKGPLDAGRLWPGAPSASSSHR*GG*ERARAGAGHRGST*A SSKIEQGRPRPGPTSDALADVEGGAES/GPHWPPLPGTLENR/P GSPPPA*ASAGRKGTVSTLGGGLL |
| 5690 | 1424 | 58 | PSPPAGVCAAPAPLPLALARRDRRPCSPCAEAPWQTGGPATD GAWRTSVSALRRGATG/APCSPGAEAPWQTGGPAIDG\DGELP *VRSEAPRGCGAEGGPGSGPVRRPGAGRGAGAGQGRQDPEP DGLRHRQHGAASHARHLRLRPGHHQNRHVRDPQAPPGGPAP GHAALPERTRGVAEPFAWAHAGSDAWRAGR*SQRT*ERARPRH PTQGRAGS\GQPGYQPPNPHPGSSPPAP/GPRGA*GNPQLE KAPRSDRNPSQGLRTRIRRPETPDCGPPSPAGSSASASTFRCTS SLSLGLP/PGAHNLDTPAQDR*HGP*CDKRGAPGVAGEDPRPP* GNFVR*LLMP/GVA*RHGTSPLFGLPSLGENCGQWDSGNLFGTP KG*SHPAFTKST*SMEAEKSYWNHPIIR\DRGRQGVRLNCLRVGE SEMWGPYSAPREGTVFLSSFLSPASEEH\PEGSSSFNTFPFPAG PEGDPGLNSPGLLP |
| 5691 | 107 | 550 | ISNDPSFGYNIEQMAKRGKKLVELPYTVKGMVDSFSGILSFIED VAHRMLATGECTPEDLCFSLQVMQ*KTGTESWG*RFYIVEQN*S GDAPLIFSPYLSLTGNCGFAMLVBITERAMAH\CGSPGGPSLWG GVGVYVLESVPLSYS |
| 5692 | 1193 | 548 | TQAWTRAEDKRGKSVRALRLHLERGPPPT*RGSHPL\QSVPCIQK PSIFSSYPI/GLPQSGGEGPGVGEQPPVRRPEQPSGCPASRMEL TSRSVPGRGALPPDSLSTRKGLPRPSTAGHRVRESGHKVPVSQ RLNLVPMGATRSNLQPPRVAVPVPTR*RDQDSKQDFSSKPLQS VPGLASTQQLTPADSGPGTGGRDATRAGLPGVETMGNVD |
| 5693 | 1258 | 1330 | ALTVPVRKGTWWAQPHGCSNLVSRARLDLSRPSQNTPEQAP *QAGPPSSLRPP\SRRR*APEWPKRATGSRRCGLSAPPWPWPA RGE/PGSAPSHAP/PNSRPSGTRHP/PGPSSRVLYSPSLPRNS PEAIVWRSSRFPLWFLRCCFWWSGFKDENFVLRF |
| 5694 | 3 | 1338 | GSKEPARSLHRRSGHKSAGKWSVTLSTAGALG*KQLHQ*WT QRCL\NNLSSEEFNASSLSLPSPTPTASRRNSTIVLRTDSEKR SLAESGLSWFSEEEKAPKKLEYDSGLKMEPGTSKWRREPERP CDDSSKGGELKKPISLGHPSGLKKGKTPPVAVTSPITHAQSA KVAGKPEGKATDKGLAVKNTGLQRSSSDAGRDRLSDAKKPPSG IARPSTSGSPGYKKPPATGTATVMQTGGSATLSKIQKSSGIPV |

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|------------|--|--|---|
| | | | KPVNGRKTSLDVNSAEPGFLAPGARSNIQYRSLPRPAKSSSMS VTGGRGGPRPVSSSIDPSLLSTKQGGTTPSRLKEPTKVASGRIT PAPVNTDREKEKAKAKAVALDSDNISLKSIGSPSTPKNQASH PTATKLAEPLPTPLRATAKSFVKPPSLANLDKVNNSNLDLPSSS DTTQCI |
| 5695 | 3 | 1338 | GSKEPARSLHRRGSGHKSSAGKWSVTLSTAGALG*KQLHQ*WT QRCL\NNLSSEEFNASSSLNSLPSTPTASRRNSTIVLRTDSEKR SLAESGLSWFSESEKAPKKLEYDSGLKMEPGTSKWRREPERES CDDSSKGGELKKPISLGHGSLKKGKTPPVAVTSPITHTAQSAL KVAGKPEGKATDKGKLAVKNTGLQRSSSDAGRDRLSDAKKPPSG IARPSTSGSGFYKKPPPATGTATVMQTGGSATLSKIQKSSGIPV KPVNGRKTSLDVNSAEPGFLAPGARSNIQYRSLPRPAKSSSMS VTGGRGGPRPVSSSIDPSLLSTKQGGTTPSRLKEPTKVASGRIT PAPVNTDREKEKAKAKAVALDSDNISLKSIGSPSTPKNQASH PTATKLAEPLPTPLRATAKSFVKPPSLANLDKVNNSNLDLPSSS DTTQCI |
| 5696 | 3 | 1338 | GSKEPARSLHRRGSGHKSSAGKWSVTLSTAGALG*KQLHQ*WT QRCL\NNLSSEEFNASSSLNSLPSTPTASRRNSTIVLRTDSEKR SLAESGLSWFSESEKAPKKLEYDSGLKMEPGTSKWRREPERES CDDSSKGGELKKPISLGHGSLKKGKTPPVAVTSPITHTAQSAL KVAGKPEGKATDKGKLAVKNTGLQRSSSDAGRDRLSDAKKPPSG IARPSTSGSGFYKKPPPATGTATVMQTGGSATLSKIQKSSGIPV KPVNGRKTSLDVNSAEPGFLAPGARSNIQYRSLPRPAKSSSMS VTGGRGGPRPVSSSIDPSLLSTKQGGTTPSRLKEPTKVASGRIT PAPVNTDREKEKAKAKAVALDSDNISLKSIGSPSTPKNQASH PTATKLAEPLPTPLRATAKSFVKPPSLANLDKVNNSNLDLPSSS DTTQCI |
| 5697 | 1147 | 47 | PSBALSPACPSAPAFRRSIIISRLFGTSPATEAAPPPPEVPAA QGPATVQSVDFVPPDLRLDSFLEDTTPARDEKKVGAKAAQQDS DSDGEALGGNPMVAGFQDDVDLEDQPRGSPPLPAGVPVSDITL SSEEAEVAAPTCKGPAPAPQQCEPETKWSIPASKPRRGTAPT RTAAPPWPGGVSVRTGPEKRSSTRPPAEMEPGKGEQASSSES DP EGFIAAQMLSFVMDPDFESESGSDTQRRADDFVPRDDPSDVTDE DEGPAEPPIPKLPLPAFRLKNDSDLFGLGLEEAGPKESSEEGK ECKTPSKENKKKKKGKEEBKAKKKSKKKSKDKKEEGKEERR RRQQRPPRSRRTAA |
| 5698 | 2 | 566 | GAEEAEPEQEDLPPLSQSSRRFFQEQKMNKSLGPVSFKDVAVDFT QEEWQQLDPEQKITRYRDVMLENYSNLVSGYHIKPDVTSKLEQ GEEPWIVEGEFLLQSYFDEWQTDLLIERIQEENKPSRQTVPI ETLLI*R/ERGNVPGNTFDVETNPVPSRKIAYTHSLCNSCER\GF NASSEYISSDGRYARKADECSGCGKSLHLIKLEKTHPGDQAYE FNQ |
| 5699 | 2 | 1448 | RVRQPPGLWVRRITVPAMQCPAGLSRVPGVAG/DPSLPSFRGPRD EAAHRTIQTARHTRKLYVQGPASGPEPLPRVSTQVAI*DEKPLA RPS/GRTNAPFPQGGKPAAGPAAAGRVAMR\PGHPGLLAS DSQRSSSKSGSWETPVVWS*AQPGWVSGLLLLGDPSGPGSL*RS TWLVGGARGPEGSGVRSWPSGCSDIGWALAGWNHS*HLDPNT WTQKWTGE/SPAPGEEG\VAPAPRGPTAEHGHCELTSTESQYSNN VPILEFQNPAGALRSRTEPAGWVPTRHE*DDG*TAAPASGGAP VSTPTWAGTP/LNASLGPTDPQGGKPCRPCCALPKPAGPERSA* GGSGLGCR/SMLPASSGPPAPGPRRLAAGHTSASARCPPAAAA GWQPRRPGFAGRAALPGPPHPPSS*RELGLPGPGW*TLDPLEA HPAHPGSAAPPWALGGWAAARASLPWSPSLCLSFPAVTPVAGL FPPGRG |
| 5700 | 923 | 597 | NGHKGVWEINII*RRSNHKNKSESHLNQDHSFPPTPNARS KLHSTGTAKNTGLPLSGAPRAVFSGRITCOEFSSCLQCAVLD E*CSIASLTIKAILRVSVLSE |
| 5701 | 59 | 410 | IFEXICSDTQEFISPEINPQICSWLIFDKGAK/NHATGKDSLEN KWSWNWNLSTCR*MRPGPYFTPYTKINSK*IK/DANIRCETVKL LEENTGENLHDTGLGNVFLDMTPKTQPTQK |

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|------------|--|--|---|
| | | | <p>GDSLGRPGLPYGLSDDESGGGRALSAESEVEEPARGPGGEARGE RPGPACQLCGGPTGEGPCCGAGGPGGGPLLPRLLYSCLCTFV SHYSSHLKRHMQTHSGEKPFRGRCYASQVLNLTTRHTRTHTG EKPYRCPHCPFACSSSLGNLRRHQRTTHAGPPTPPCPTCGFRCTP RPARPPSPTEQEGAVPRRPEDALLLPDLSLHYPPGGASFLPDCG Q/CGVKGRASAGLDQNHQCS/SLFPWTGRCGCGOELEEGEGSRLG AAMCGRCMRGEAGGASGGPGQPSDKGFACSLCPFATHYPNHLA RHMKTHSGEKPFRCARCPYASAHLDNLKRHQRVHTGKPKYCPL CPYACSNLANLKRHGRHSGDKPFRCSLCNYSNQMNLIRHM</p> |
| 5718 | 120 | 284 | <p>VAHALSLPAESYGNVSMTHPQLPPTQLAWDLCTCLPLSYNFT S**STADPLHL</p> |
| 5719 | 48 | 428 | <p>ELNNGPFQMPPLCNGGNLAVTGSWADRSPLEHAASQGRLLALRTL LSQGYNVNAVTLDHVTPLEHACLDHVCARTLLEACANVNAIT IDGVTPFLNACSQSPSCAELLLEYGAKAQP\ESCLESP</p> |
| 5720 | 1 | 1051 | <p>LQAFRNASEVPMVLVGTQDAISAA\NPRVYRRTSRARKLSTDLK \RCT\YYE\TCGGTYGLQMWVSFQDVACKVVAL\RKKQ\LA GPKC\SLFN\SPSH\SAVSAASIPARAPINQGH/SGGSAFSD Y\SSSVSPSTPSISQRELRITIAASSTPTPIRKQSKRRSNIFTS RKGADP\REKKAAGCKVDSIGSGRAIPKQGIILKRSKSLNK EWKKKYVTLCDNGLLTYHPSLHDYMQNTHGKEIDLRTTVKVP KRLPRATPATAPGTSPRANGLSVERSNTQLGGCTGAPHSASSAS LHSEPLSSSAWAGPRPEGLHQQRSCSVSSADQWSEATTSLPPGM QHPASG</p> |
| 5721 | 97 | 492 | <p>RHSSPCCSLRRTERSNAAVST/TTVQQFKRFIENYRRHIGCVA VFYALAGGLFLERAYYAFAAHHTGTDTTRVGIILSRGTAASI SFMFSYILLTMCNRLITFLRETFLNRYVPPDAVDFHRLIASTA</p> |
| 5722 | 88 | 1043 | <p>VALDVLGSSSPGGMGAGALLGPRVHGIRAVLRVARGGVQAPGAP GSLGVSHAAAPPARPQGAQSPHRRRHGGGAGLPPPRSPRFP QESVPASTSTARGPRRVSRLPPQHPGPRGRRRRPGAGVGAPRR GRARGQAGLLGRQCGGGRGAERERAAQARRRRPGPEPDQSCG GRFRRAAAAPGRAPADPQPPAPREAPADVREPPADAPAPAPAPA PPPPPHLGALTAGSGEERQSQPRAETLRLGRGAPLP\PRAERGG RPKQAEQQQ\PKRPTPPARGPQSSGDPAMLPQRAGLRTGGLAGT KSSTREIPEMI</p> |
| 5723 | 88 | 1043 | <p>VALDVLGSSSPGGMGAGALLGPRVHGIRAVLRVARGGVQAPGAP GSLGVSHAAAPPARPQGAQSPHRRRHGGGAGLPPPRSPRFP QESVPASTSTARGPRRVSRLPPQHPGPRGRRRRPGAGVGAPRR GRARGQAGLLGRQCGGGRGAERERAAQARRRRPGPEPDQSCG GRFRRAAAAPGRAPADPQPPAPREAPADVREPPADAPAPAPAPA PPPPPHLGALTAGSGEERQSQPRAETLRLGRGAPLP\PRAERGG RPKQAEQQQ\PKRPTPPARGPQSSGDPAMLPQRAGLRTGGLAGT KSSTREIPEMI</p> |
| 5724 | 3 | 1841 | <p>FTNEAPPAPLPDASASPLSPHRRRAKSLDRRSTEPSVTDDLNF KGWLTQYEDGQWKHWFPALADQSLRYRDSVAEEAADLDGEID LSACYDVTEYPVQRNYGFQIHTKEGEFTLSAMTSGIRRNWIQTI MKHVHPTTAPDVTSSLPEEKNKSSCSFETCPRPTEKQEAELGEP DPEQKRSRARE\RRREGRSKTFDWAEFRIQQAQAEVGGVGP ADTH\DPWRPEAEHGELEERERARRREERRKRFGLMDATDGPGE DAALRMEVDSPGLPMSDLKTHNVHVEIEQRWHQVETTPLEEEK QVPIAPVHLSSDGGDRLSTHELTSLLEKELEQSQKEASDLLEQ NRLQDQLRVALGRBQSAREGYVLQATCERGFAMEETHQKKIE DLQRQHORELEKLREEKDRLLAEBTAATISAIBAMKNABREME RELEKSQRSQISSVNSDVEALRRQYLEELQSVQRELEVLSQY QKCLENAHLAQALEAERQALRQCQRENQELNAHNCLENNLRAE ITRLRLTLTGDDGGGEGATGSPLAQGGDAYELEVPNGARPCLTQLC TOEPQGSAAWPLSYRVVGGTDLRQQESQGPGRSKSPEGGEEQ</p> |
| 5725 | 3 | 1049 | <p>VNGHSEETSQSPNRTEPHSDSCSDVLGISKSTEDLSPQKSGPVG SVVKSHSITNMEIGGLKIYDILSDN\DLSSHLQPLK/FTSAVDG KNIVRSKAATLLYDQPLQVFTGSSSSSDLSGTKAIFKFDNSHN PE/GAKYNKRPHKWAHNLHLKYMVLHSIISNTVAV\RSQRHFVA</p> |

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|------------|--|--|--|
| | | | LQTKSPNRPCQFSSAPS/VDQRAQ/INQSYAKHSANMNFNHN NVRANTAYHLHQLGPARHGEKWAISPNDRLIPAVTRSTIQRS SVSSTASVNLGDPGSTRRAQIFEGDYSYREFHSAGRTPPMMPG SQRPLSARTYSIDGPNASRPQARPSINEIPERTMSVSDFNYSR TSP |
| 5726 | 2 | 486 | SRSLSMWNSGLPASSHSSKLPVTVGFSGCCVKRLRLHGRPLGAP TRMAGVTPCILGPLEAGLFFPGSGGVITL/ESVGAGIPGPSRAG QGSPGGSGEGPPLSSPSQPLPADLPGATLPDVGLELEVRPLAVT GLIFHLGQARTPPYLQVTEKQVLLRADDG |
| 5727 | 21 | 221 | RFILILKETRRLPWATGYAEVTNAGKSTHNEQASCEVLTVKKK AGAVTSTPNRNSKRRSSLPNGE |
| 5728 | 2 | 877 | GTRNGQFEPRRGRAWEGSAGGLRAPGAAAGPGVQPRGSG/LPG NAIRAGVNPGRGPASPFWDLSLPWDLWPPPTDHAPGAPDFPAVE GR/PWAGGRPPWPVSGVLGSRVCGPLYSTSPAGPG/SGGLSPSQ GGPAGAGGDAG/LPGRCPSPAPWRAGSRPAASCPDWIFGPQGLWL HRNPTS/GPPSQIGEGAEQGDGVDAPQIQCKN/GAEDPPAED EPPQVPEAGEEDAVPAEGPGGTPEQADQVRERPEAHLAGGA KGSFRRLLADPQDLPAQOMSLAPFFPPVAIVIRSNK |
| 5729 | 1 | 1525 | AGGAREVLTQLGHFAGFVGAHWNNQDAAIGRATDSKEPPGEL CPDVLYRTGRTLHGQETYPRLILMDLKGSLSSLKKEGGLYRDK QLDAAIAWQGLTTHKEELYKPNPYLQDFLSAEGVLSSDGVWRV KSIPIKGGSSPLPTATTPKPLIPTEASIRVWSDFLRVHLHPSI CMIQKYNHDEAGRLEAFQGQESVLKEPKYQBELEDRHLHFVVEE CDYLQGFQILCDLHDGFSGVGAKAELLQDEYSGRGIITWGLLP GPYHRGEAQRNRYRLNLTAFGLVHLTAHSSSLVCPVSLGGLSLGLR PEPPVSPFPHYDATLEFHCSAILATALDITVCS/YRLCSSPVV MVHL/ADMLSFCGKKVVTAGAIIPPLAPGQSLPDSLMOFGGAT PWTPLSACGEPGSGTRCFASQSVVLRGIDRACHTSQLTPTGTPPPSA LHACTTGEEILAQYLQQQQPGVMSSSHLLTPCRVAAPPYPHLFS SCSPPGMVLGDSPKGAIVESVPVFG |
| 5730 | 1258 | 1713 | KKQAPARETCVCEQRTVYPMERLLANQVVFHISCFRCSYCNK LSLGTYSALHGRIYCKPHFNQLFKSKGNYDEGFGRPHKDLWAT KIETEGFWERPRNFENQGRPLKSPGGEDCPSC*GGCPGSNY*AQ GSSSREXGGQASWNPCLRVA |
| 5731 | 122 | 443 | RSRGEIIPKDS CYMRKPPRPDKRRQG/CALPQGLTFKDVAI EFSLEEWKCLNPAQRALYRAVMLENYRNLESVGLTSKDSWYMRK KPGRGRGKQRRQEWFFLRVY |
| 5732 | 226 | 772 | PPSRSCQSPRRKSRRAHVTVTLVCGFTSFSFSLPLYLCGCLRF PERTCSLOQADWADFGPSSFVPSWGATATGARKFLIAFNI\N LLGTKEQAHRIALNLRQGRGKDQPGRLKKVQIGWYLDKKNLA QVSTNLLDFEVTALHTVYEECTCREAQELSFPVVGSQLVGLVPLK ALLDAA |
| 5733 | 1 | 460 | PALQEVNANALAWGKQYENDARTLFEFTSGVNDTESPIIYRDES MRTACSPDGLCSDGNLELKCPTTSRDFMKFRLGGFEAIKSAYM AQVQYSMWVTRKNAWYFANYDPRMKREGLHYVVIERDEKYM\AS FDEI\VP\EFICKMDEVLSRDP |
| 5734 | 3 | 968 | RCNSPESLTSLLVLLTANNLFVLIPAYSKNRAYAIFIVFTVI GSLFLMNLITAIYSQFRGYLMKSLQTSLFRRRLGTRAAFEVLS SMVGEAGGAFPAVGVPQNLQVLQVQLDSSHQAMMEKVRVSY GSVLLSAEEFQKLFNELDRSVVKEHPPRPEYQSPFLQSAQFLFG HYFYDVLGNLIALANLVISCVFLVLDADVLPAERDDFILGILNC VFIVVYLLLEMLLKVFALGLRGYLSYPSNVFDGLLTVVLLVLEIS TL\VTCTDCHTQAGGRWW/RLLSLWDMTRMLNMLIVFRFLRIIP SMKPMVAVASTVLGL |
| 5735 | 2 | 540 | FFTPCVARAFNFPDQATVKKAAYSLPRVGGGTSCGLPQARRISL ATPRQLYK/SSNMTQRWQRREISNFEYLMPLNTIAGRTYNDLNQ YPVFPWVLTNYESELDTLEGNFRDLSKPIGALNPKRAVFYAE RYETWEDDQSPFYHYNTHYSTATSTLSWLVRIVSIFIELACLWY LKILT |
| 5736 | 1 | 382 | GTRPSTKKSGYSPQQVAVIHCCKGHQKENTAVAHSNQKADSAQV |

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|------------|--|--|--|
| | | | TARLSVTPPNLLPTVSFPQPDLPDNFVYSTTTEKLASDLRANKN QES**ILPDSGIFIP*T*TSYLQSTTHLRRAKLPQLLR |
| 5737 | 290 | 1041 | KACHLHLLSFLTSNLFNPLLPDLSLYSEARSQRANLGPCCRKR LQTMRLAAGFQYSSHKDPSLSAKEKHTDYHNEARGPWPGWG* RTADGSCGRGPDGAHHPGPKSSSWRASRLPLGLGSSHLDAYVG RDLECGTPAPLQLEIPPQPRGHPAPIPTGQAGPRDSGPGASP*V ETRPLTDGRR*PGVRPVGWTPAHFAGTLRPRGAVEPSVSACGKW APSPTSQGCCEGRCDAPVPHRAWRTPLCSEQ |
| 5738 | 8 | 460 | DTLSLNLCTLPETLPMTPSF*LSFL*FPGLARAKSIPTKTYSENV VTLWYRPPDILLGSTDYSTQIDMW*GQVEVWQGPCGKGGGLVTT ATQPAAFLLFTVPSLPRGVGCIFYEMATGRPLFPGSTVBEQLHFI FRILSEEAALCAVETHR |
| 5739 | 1 | 1222 | SFQRRGIRWNVHTLHPHRAVWAGIGRGHGS*ALLGRARAPALC FPTLLEFLESLEPDLPALRAMGLHLWAAGPGTHPAGISDLLAEV SAEVDGPVPGYLSSPQSITDTCLYIFTSGTGLPKAARISHLKI LQCGFYQLCGVHQEDVIYALPLYHMSGSLGIVGCMGIGATV VLKSKFSAGQFWEDCQQHRVTVFQYIGELCRYLVNQPPSKAERG HKVRLAVGSGRLPDTWERFVRRFGPLQVLETYGLTEGNVATINY TGQRGAVGRASWLYKHIFPFSRLRYDVTTEPIRDPQGHCMATIS PGEPLLVAPVSOOSPFLGYAGCPPELAQGLKLDVFRPGDVFFN TRDLLVCDDQGFRLRFHRTGDPFRWKGENVATTEVAEVFEALDF LQEVNVYGVTV |
| 5740 | 265 | 231 | PAYWLKVFETLCLESKTDLREKASHVSAQLQGEVRGLAGALWM*A YVYERVYN*NISRMVHALEQKRHPAGLSSSMALQLNFCGLMLMA LQSELHKLIDEETQSWVSGSACGGYP |
| 5741 | 1 | 650 | PRKTMRRGVLMTLLQCSAMTLPWLWIGKPGDRPPPLCGAIPASGD YVARPGDKVAARVKAVDGDEQWILAEVVSYSYSHATNKYEVDIDE EGKERHTLSRRRVIPLPQWKANPBTDPALFQKEQLVLALYPQT TCFYRALTHAPPQRPQDDYSVLFEDTSYADGYSPLNVAQRYV V ACKEPKKK*CRLADSPSPNDTGQDSRGRAGIKHIPPLKKK |
| 5742 | 2 | 362 | TQSVKEILKRNPNVNLTDKDGNTALMIASKBHTTEIVQDLLDAG TYVNIIPDRSGDTVLIGAVRGHVEIVRALLQKYADIDIRGQDNK TALYWAVEKGNATMVRDILQCNPDTEICTKDG |
| 5743 | 2 | 415 | GKTFEGIDAIEIEIDLEETEREISPOENGLEEVKPLGEMQTDL KATGREISPREKTPEVIDATEEIDKLEETGRREISPEENGPEE VKPVDEMETDLKTTGREGSSREKTREVIDAAEVIETDLEETERE ISPQE |
| 5744 | 3 | 703 | TRRTTTTSPTTTRQMTTTPAALPTTVVTPDLTGTPLQMTTIA VPTTANTCLSLTPSTLPEBATGLLTPEPSKEGPILTAESETVLP SDSWSSAESTSADTVLLTSKESKVWDLPTSHVSMWKTSDSVSS PQPGASDTAVFEQNKTTKTGQMDGIPMSMKNEPISQLLMIAP SLGFVLFAFVAFLLRGKLMETCYCSQKHTRLDYIGDSKNVLNDV QHGREDEDGLFTL |
| 5745 | 1400 | 599 | GKSRFVNLMKHSKKTYSDFQDELEDYIKVQKARGLEPKTCFRKM KGDYLETCGYKGEVNSRPTYRMFDQRLPSETIQTYPRSCNIPQT VENRLPQWLPAHDSRLRLDSLSYCFTRDCFSEKPVPLNFNQOE YICGSHGVEHRVYKHFSSDNSTSTHQASHKQIHQKRKRHPPEEGR EKSEEBRSKHKRKKSCBIEIDLKHKSIQRKKTEVEIETVHVSTE KLNKRKKKSRDVVSKEERKRTKKKKEQGERTEEEMLNDQSI LGF |
| 5746 | 3 | 821 | SFASGRLLTPSSPAFDGELDLQRYSGPAVSAWSLGMCAVSWSES RAGERAFPVCGKRFNFNSILALHLRTHQPERPRSPAARLLE LEERALLREARLGRARSSGMOATPATEGLARPQAPSSAFRCF YCKGKFRSAERERHLHLRHPWKCGLCSTFGSSQBEELLHSLT AHGAPERPLAATSAAFPQPQPQPQPPEPRSPVQPEPEPQPER EATPTAPAAPEEPAPPEFRCCVCGQSFTQSNFLKGHMRKHKA SFDHACPV |
| 5747 | 2 | 1328 | DRHVELTCHFLGPSTGSTAKTGGRNWLKTGNCLYGNTCRFVHG PSPRGKYSSNYRRSPERPTGDLRERIKNRQDVDTPEQKRNT E SSSPVKESRGRHREKEDIKITKERTPESEBENVEWETNRDD |

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|------------|--|--|--|
| | | | SDNGDINVDYVHELSELMKQKIQRELMKLEQENMEKREETIIK KEVSPPEVVRSKLSPSPSLRKSSKSPKRKSSPKSSSSASKKDRKTS AVSSPLLDQQRNSTKINQS KKKGPRTSPFPPIPEDIALGKKYKE KYKVKDRIEEKTRDGRDGRDFERQKRDKPRSTSPAGQHSP ISSRHSSSSSQSGSSIQRHSPSPRRKRTSPSYQRTLTTPPLRRS ASPYPHSLSSPQRKQSPPRHRSPMRKGRHDHERTSQSHDRRH ERREDTRGKRDREKDSREEREYEQDOSSSRDHRDDREPRDGRDR RE |
| 5748 | 934 | 473 | SEGPQVFFYKGLAPTLIAIFPYAGLQFSCYSSSLKHLKWAIPAEG KKNENLQNLCCGSGAGVISKTLTYPLDLFKKRLQVGCPEHARAA FGQVRRYKGLMDCAQVLQKEGALGFFKGLSPSLKKAALSTGFM FFSYEFFCNVPHCMNRTASQR |
| 5749 | 552 | 1 | GFVDPVPRVGRSTLSLAERPCKMIRSGSFRDPTDDVHGSVLSLAS SASSTYSAAEERMQSEQIRKLRRLESSQEKVATLTSQLSANAN LVAAFEQSLVNMTSRLRHIAETAEEKDTLELDLRETIDFLKKKN SBAQAVIQGALNASETTPKELRIKRNSSDSISSLSNITSIHSSI GSSKDADA |
| 5750 | 22 | 866 | IFISICLWNAHLCFLLLPKDCIDQVMKLQNLVDDSGRYLAIQF ILEWAYVFLYYEYRKAKDQLDIAKDLSQLQIDLTGALGKRTRE QENYVAQLILDVRREGDVLSNCEFTPAPTQEHLETKNLELNDDT ILNDIKLADCEQFQMPDLCASEIAIILGICTNFQKNNPVHTL TE VELLAFTSCLLSQPKFWAIQTSALILRTKLEKGSTRRVERAMRQ TQALADQFEDKTSVLERLKI FYCCQVPPHWAIQQLASLLFEL GCTSSALQIFEKLEMWE |
| 5751 | 3 | 751 | SCGSALRAWRCGAAALATFPAPALPGLMYRALYAFRSAEPNALA FAAGETFLVLERSSAHWWLAARARSGETGYVFPAYLRRLQGLEQ DVLQALDRAIEAVHNTAMRDGGKYSLERQGVQLKLIHHRKETLS RRCPSASSVAVMTSSTSDHHLDAARQPNVCRAGFERQHSLEP SSEHLGADGGFLQIPLPSSQIPQPRRAAPTTPPPVVKRRDREA LMASGSGGHNTMPSGGNSVSSGSSVSSCI |
| 5752 | 3 | 471 | GPVCGVGLSVAGWPWRGPVHVSVGGGGRALHGAELPCLSGAAT VEREMELRHKNEMLRVETBARARAKAERENADIIREQIRLKASE HRQTVLESIRTAGTLFEGGFRAFVTDRDKVTATVNI FIKQGWQV AERQHV GASWSPRSCPCRLCTAL |
| 5753 | 34 | 483 | DDXAIPGGVCAPFGAVRNITPRTGHRIRKLDQIQSGGNYVAG GQBAFKKLNLYLDIGEIKKRPMEVVNTEVKPVIHSRINVSARFRK PLQEPCTIFLIANGDLINPARRLLIPRKT LNQWDHVLQMVTEKI TLRSGAVHRLYTLLEGRLV |
| 5754 | 14 | 331 | TLVHVVEFAGEHAEATASREQEVLQGWKELLSACEDARLHVSST ADALRFHSQVRDLLSWMDGIASQIGAADKPRCPSSLLGLPASPW WPTPATPSPLTAPFSME |
| 5755 | 3 | 888 | LGDQFYKEAIEHCRSYNSRLCAERSVRLPFLDSQTGVAQNCCYI WMEKRRHGPGLAPGQLYTTPARCWRKKRRLHPPDPKLRLLLEIK PEVELPLKKGFTSESTLEALLRGEGVEKKVDAREEESTQEIQ RVLENDENVEEGNEEDLEEDI PKRKNRTGRARGSAGRRRRHD AASQEDHDKPVVCDICGKRYKNRPGLSYHYATHLASEGDEAQ DQETRSPPNHRNENHRPQKGPDPGTVPNNYCDFLGGSNMNKKS GRPEBLVSCADCGRSAHLGGEGRKEKEAAA |
| 5756 | 3 | 621 | SSKLQALFAHPLYNVPEEPPLLGARDLSLASQALRYRKRVAR WNRHMKMYREQMNLSTLDPPLQLRLEASWVQFHLGINRHGLYSR SSPVVSKLLQDMRHFTTISADYSQDEKALLGACDCTQIVKPSGV HLKLVLRFSDFGKAMFKPMRQQRD3ETPVDFYFIDFQRHNABI AAFHLDRILDPRVPPTVGRIVNVTKEL |
| 5757 | 3 | 473 | YKDALLLPDNRHQVVFENGTLKLTDVQKGMDEGEYLCVLIQPO LSISSQSVHVAVKVPPLIQPFEPFPASIGQLLYIPCVSSGDMPI RITWRKDGQVLIISGSGVTIESKEFWSSLISSVSLKHNGNYTCI ASNAATVSRERQLIVRVPPRFVV |
| 5758 | 1 | 474 | FRRGAGAERGEHREGGAGMGEFKVHVRVFFNYVPSGIRCVA YNNQSNRLAVSRDTGTVEIYNLSANYFQEKFFPGHESRATEALC WAEGQRLFSAGLNGEIMEYDLQALNIKYAMDAFGGPIWMAASP |

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|------------|--|--|---|
| 5759 | 2 | 1240 | SGSQQLVGCEGDSVKLFQITPDKIPV GNAAFAGQGVVYETFFHMSDLPSYTTNGTVHVVVNNQIGFTTDP MARSSPYPTDVARVVNAPIFHVNADDPBAVIYVCSVAEWRNTF NKDVGADLVCYRRRGHNEMDEPMFTQPLMYKQIHRQVPVLKKYA DKLIAEGTVTLQEFEEEEIAKYDRICEEAYGRSKDKKILHIKHWL DSPWPGFNVGDEPKSMTCPATGIPEDMLTHIGSVASSVPLEDF KIHTGLSRILRGRADMTKNRTVDWALAEYMAFGSLLEKEGIVHRL NGQDVERGTFSRHHVLDHQEVDRRTCVPMNHLWPDQAPYTVCN SSLSEYGLGLFELGYAMASPNALVLWEAQFGDFHNTAQCIIDQF ISTGQAKVWRHNGIVLLPLPHGMEGMGPEHSSARPERFLQMSNDD SDAYPAFTKDFEVSQ |
| 5760 | 1 | 1221 | VRDITSDLSLSLWTVPEGQFDHFLVQFKNGDGQPKAVRVPGHED GVTISGLEPDHKYKMNLYGFHGGQRVGPVSAVGLTAFGKDEEMA PASTEPTPEPPIKPRLEELTVTDATPDSLSLSLWTVPEGQFDHF LVQYKNGDGQPKATRVPGHEDRVTISGLEPDNKYKMNLYGFHGG QRVGPVSAIGVTAAREETPTPEPSMEAPEPEPEPLIGELTVTG SSPDSLSLSLWTVPGQGRFDSFTVQYKDRDGRQPQVVRVGGESEVT VGGLEPGRKYMHLGLHEGRRVGPVSTVGVTAQEDVDETPSP TEPGTEAPEPEPEPLIGELTVTGSSPDSLSLSLWTVPGQGRFDSFT VQYKDRDGRQPQAVRVGGQESKVTVRGLEPGRKYMHLGLHEGR RLGFVSAIGVT |
| 5761 | 3 | 1275 | SCDMAEAAALVWIRGPGFGCKAVRCASGRCTVRDFIHRHCQDQ VPVENFFVKNGALINTSDTVQHGAIVYSLEPRLCGGKGGFGSML RALGAQIEKTTNREACRDLGRRRLRDVNHEKAMAWEVKKQAERE AEKEQKRLERLQKRLVEPKHCFTSPDYQQQCHEMAERLEDSVLK GMQAASSKMVSALISENKRQWPTKSQTDGRGASAGKRCFWLGM EGLETAEGSNSESSDDSEEPSTSGMGFHPKIGSNGVEMAAK FPGSGQRARVVNTDHGSPEQLQIPVTDGRHILEDSCAELGESK EHMESRMVTETEETQEKKAESKEPIEEPTGAGLNKDKETEERT DGERVAEVAPEERENVAVALKQESQPGNAVIDKETIDLLAFTSV AELELLGLEKLCCELMALEGLKCGGTLQ |
| 5762 | 2 | 344 | GSTGQTPHSCGGGGSGGGRRTPRGMPKEKYEPPDPRRMYTI MSSEEAANGKSHWABLEISCKVRSLASLWSTLHTALHLSDN SLSRIPSDIAKLHNLVYLDLSSNKIR |
| 5763 | 3 | 429 | LDKDTGLIMLIARLDYELIQRFTLTIIARDGGGEETTGRVRINV LDVNDNVPTFQKDAYVGALRENEPSVTQLVRLRATDEDSPPNNQ ITYSIVSASAFGSYFDISLYEGYGVISVSRPLDYEQISNGLIYL TVMAMDAGN |
| 5764 | 19 | 441 | VCARACGEMRQLLRPIDRQRYDENEDLSDEEIVSVRGFSLBEK LRSQLYQGDFVHAMEGKDFNYEYVQREALRVPLIFREKDLGLIK MPDPDFTVRDVKLLVGSRRLLVDVMDVNTQKGTMSMSQFVRYYE TPEAQRDKL |
| 5765 | 3 | 825 | QKILRLNNSHQPPTSSSNSKDCGGPASSGAGATAALADGLKFAS VQASAPQGNSHKETS KSKVKRSKTSKDANKSLPSAALYGIPEIS STGKRQEVQGRPGBATGMNSALGQSVSSGGSGNPNNSNSTSTSTS AATAGAGSCGKSKEEKPQKSSQSSRGAKRDKDAGKSRDKHDLQ GHQNGSGSQAPSGGHLGFGAKSNGGGASPFHCGGTGSGSVAAA GEVSKAPDSGLMGNSMLVKKBBBBEEESHRRRIKKLKTKEVDPLF TVPPAPPHV |
| 5766 | 1608 | 663 | SGLFSDVPASSQAMELSDVTLIEGVGNEVMVAGVVVLILALVL AWLSTYVADSGSNQLLGAIVSAGDTSVLHLGHVDHLVAGQGNPE PTELPHPSEGNDKAEAEAGEGRGDSTGEAGAGGGVEPSLEHLLD IQGLPKRQAGAGSSSPAPLRSEDSTCLPSPGLITVRLKFLND TEELAVARPEDTVGALKSKYFFGQESQMKLIYQGRLLQDPARTL RSLNITDNCVHCHRSPPGSAVPGPSASLAPSATEPPSLGVNVG SLMVPVFFVLLGVVYFRINRYQFFATPATVSLVGVTVFFSFTV FGMYGR |
| 5767 | 2 | 892 | NFRATPRPPTRPPELRTGTETVLWYLDWRALMKRKRKMANIKLVG SGFPLPSSDLDSLTEEIDEKIGFRNDANFDWQNVADFRDAGGS LTEVKVEEERDPQSPPEIEEEEEMLSSVIPDSRRENELPDFP |

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|------------|--|--|--|
| | | | HIDEFFTLNSTPSRSAYDEPHLLVNIKQKLELEKRRLDIEAER LQVEKERLQIEKERLRHLDMEHERLQLEKERLQIEREKLRLQIV NSEKPSLENELGQGEKSMQLPQDIETEKLEKLERERLQLEKDRLO FLKFESEKLQIEKERLQVEKDRRLRIQKEGHLQ |
| 5768 | 3 | 476 | SSRRLSVSVSPPPPGIVELGPPFAWEFCSSRLGSAVTSQRAGPA AAMVAKDYPFYLTVKRANCSLELPASGPAKDAEESPNKRVKPL SRVTSLANLIPPVKATPLKRFSTLQRSISFRSESRPDILAPRP WSRNAAPSSTKRRDSKLWSETFDVC |
| 5769 | 38 | 667 | TKTKKGVEKATDQSVKAFAEHCPELQYVGMGCSVTSKGVHIL TKLRNLSSLDLRHTELDNETAMEIVKRCNKLNLCLNWIIN DRCVEVIAKEGQNLKELYLVSKITDYALIAIGRYSMTIETVDV GWCKEITDQATLIAQSSKSLRYLGLMRCDKVNVEVTBQLVQOY PHITFTSTVLQDCKRTLERAYQMGWTPNMSAASS |
| 5770 | 1 | 484 | DSRRYDVKTRKWSFLEEHSKLIKVRCLPQVQLDPLPTTLTLA FASQLKKTSLSLTPDVPEADLSEVDPKLVSNLMPFQRAGVNFAL AKGGRLLLLADDMLGKTTIQAICIAAFYRKEWPLLVVVPSSVRFT WEQAFRLRWLPSLSPDCINVVTGKDRLLTA |
| 5771 | 168 | 741 | GLLPSACLRARSWREASEGFPSSRACSNQSQTDFEACYSGTSTPS FHGSHCSGSDHSSGLGLEQLQDYMVTLRSKLGPLEIQQFAMLLRE YRLGLPIQDYCTGLLKLYGDRRKELLGMRPFIPDQDIGYFEGF LEGVGIREGGILTDSFGRIRKSSMSTSSASAVRSYDGAQRPEAQ AFHRLADITHDIE |
| 5772 | 148 | 383 | EFNLALVSPSHFPQIKAEDDQPLFGVLLSLSGGLFRSNLLTQDNG ILTFSNLVTCSAIYHLPVFPEREPCGSMRDLRA |
| 5773 | 2 | 723 | PRVRSKHNFCEFMENTRLQVEHPTVEMITGTDLVEWQLRIAAGE KIPLSQEEITLQGHAFEARLYAEDPSNNFMFVAGPLVHLSTPRA DPSTRIETGVRQGDVSVHYDPMIAKLWVAADRQAALTKLRYL LRQYNIVGLHTNIDFLLNLSGHPEFEAGNVHTDFIPQHHKQLLL SRKAAAKESLCQAALGLILKEKAMTDTFTLQAHQDQSPFSSSSG RRLNISYTRNMTLKDGNKSK |
| 5774 | 2 | 592 | FVEENIRVVRCGGSELNFRRAVFSADSKYIFCVSGDFVKVYST VTEBCVHILHGHRLNLTGTLQNLNPNHLQLYSCSLDGTIKLWDYI DGILIKTFTIVGCKLHALFTLAQAEDSVFVIVNKEKPDIFQLVSV KLPKSSSQEVEAKELSFVLVDYINQSPKCIAFNGEVYVAAREF YLSVYFFKKETTSRVTLSSS |
| 5775 | 3 | 538 | SSGCCDPAAPSSLAEAATMPVSKCPKKSSESLWKGWDRKAQRNGL RSQVYAVNGDYVVGWKNVKGKGTQVWKKKCAIYEGDWKFGK RDGYGTLSPDQQTGKCRRVYSGWKGDKKSGYGIQFFGPKY EYEGDWCGSQRSQSGWGRMYYSNGDIYEGQWENDKPNEGMRLRLSQNP RP |
| 5776 | 2 | 484 | RLPQDCVCQNLSESLGTLCPKGLLFVPPDIDRRTVELRIGGNF IIHISRQDFANMTGLVDLTLNRNTISHIQPFSLDLESLSLHL DSNRLPSLGEDTLRGLVNLQHLIVNNQLGGIADAEAFEDLLTL EDLDLSYNNLHGFPAVGLRGDANVQPSTS |
| 5777 | 2 | 949 | GQDPEPGQDLFQPEREVDPSWGRGREPRLGKLRQNDHLSVLKQ VKKLEQALKDGSAGLDPLPGTCYSPHCPDKAEAGSTLPENLG GGSGSEVSQRVHPSDLEGREPTPELVEDRKGSRRPWDRSLNV YRGSEGSPTKPFINPLPKPRRTFKHAGEGDKGKPGIGFRKEKR NLPPLPSLPPPLPSSPPSSVNRRLWTGRQKSSADHRKSYEFE DLLQSSSESSRVDWYAQTKLGLTRTLSEENVYEDILDPPMKENP YEDIELHGRCLGKKCVLNFPASPTSSIPDTLTKQSLSKPAFFRQ NSERRNV |
| 5778 | 1 | 1210 | QRRQSVSRLLLLPVFLEPPAEPLGPEPPPEEGGEPAGVAEEPGS GGPCWLQLEEVPGPGPLGGGGLRSPSSYSDELSPGEPLTSP WAPLGAPERPEHLLNRVLERLACGATRDSASDILLDDIVLTHS LFLPTEKFLQELHQYFVRAGMEGPEGLGRKQACLAMLLHFLDT YQGLLQEEEGAGHI IKDLYLLIMKDESLYQGLREDTLRLHQLVE TVELKIPEENQPPSKQVKPLFRHFRIDSLQTRVAFRGSDEIF CRVYMPDHSYVTIRSRLSASVQDILGVSVEKLQYSEEPAGREDS LILVAVSSSGEKVLLQPTEDCVFTALGINSHLFACTRDSYEALV |

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|------------|--|--|---|
| | | | PLPEEIQVSPGDTETIHRVEPEDVANHLTAFHWELFRVH3LEFV DYVFHGE |
| 5779 | 138 | 1671 | EAVQVLIKHSADVNRDKNWQTPHVAANKAVKCAEVIIPILS SVNVSDRGGRTALHHAALNGHVEMVNLHAKGANINAFDKKDRR ALHWAAYMGHLDVVALINHGAETVCKDKKGYTPLHAAASNGQI NVVKHLLNLGVEIDEINVYGNLTALHIACYNGQDAVVNELIDYGA NVNQPNNGFTPLHFAAASHTGALCLELLVNGADVNIQSKDGK SPLHMTAVHGRFTRSQTLIQNGGEIDCVDKDGNTPLHVAARYGH ELLINTLITSGADTAKCGIHSMPPLHLAALNAHSDCCRKLSSG QKYSIVSLFSNEHVLSAGFEIDTPDKFGRTCLHAAAAGGNVECI KLLQSSGADFHKKDKCGRTPLHYAANCHFHCIETLVTTGANVN ETDDWGR TALHYAASDMDRNKTILGNAHDNSEELERARELKEK EATLCLEFLLQNDANFISIRKKEGYNISHYAAAYGHRQCLELLE RTNSGFEESSDGATKSPHLHAVSEMP |
| 5780 | 154 | 624 | QFPRVITCLPFKGPDYRLYKSEPELTVAEVDENGEKSEPVS EITSVVKGSHFPVGVPPRAKSPTESSSTIASYVTLRKTKMM DLRTERPRSAVEQLCLAESTRPRMTVEEQMERIRRHQOACLRK KKLGNVIGASDQSPQLQSPSNLRDNP |
| 5781 | 19 | 941 | RGSLGGHPWRPMPRAASQGCPLVSVFTGPHQERAYGGRGPGGAF PAFPVSGTCPPDLIYAPTPEKAEGGSQKNHQPPGGERAAHRDGE QAPCRAGPTRKVAVAPRPPSCP*GPE\PGEEP RRPLDRSPPLGQ VQPHFTSQDAKSAEAPSRHLGKHQPRSAQVGSRLDALQGGPKT QHSIHTVTCKSPRQKEDRSKPFPQAPKHPEEHGRQS\QAPPPLP VAPSRTC GGC*TWDPALLVSP/PQGDSTPELPAP\QOPTGGPSR CRQALPQG* RQQPRQRPR/PTGASRSHPAKAGCQGPPIRNY NIMD |
| 5782 | 5176 | 1237 | DRSMMSMAADSYTDSYTDITYTAYMVPPPLPEEPPTMPPLPPEE PPMTPPLPPEEPPEGPALPTEQSALTAENTWPTVPSLPSEESV SQPEPPVVSQSEISEPSAVPTDYSVSASDPVLSAAVTVPEPP PEPESSITLTPVESAVVAEEHEVVPERPVTCMVSETPAMSAEPT VLASEPPVMSETAETFDMSRASHVASEVSTSLLPVAVTTPVLA ESILEPPAMAAPESSAMAVLESSAVTVLESSTVTVLESSTVTVL EPSVTVPEPPVVAEPDYVTIPVPVVSALEPSVPVLEPAVSVLIQ PSMIVSEPSVSVQESTVTVSEPAVTVSEQTQVPIPEVAIESTPM ILESSIMSSHVMKGINLSSGDQNLAP EIGMQEIALHSGEHPHAE EHLKGDFFESEHGINIDLNNHLLIAKEMEHNVTCAAGTSPVGE IGEKILPTSETKQRTVLDTPGVSEADAGETLSSTGPFALPED ATG\TSKGIEFTTASTLSLVNKYDVLSTLTDTEHDMLISTSP SGGSEADIEGPLPAKDIIILDLPSNINLVSDTNEPLPVKRD\DQ TLAALI\SLKSSSGGEKEVPPPS*REHLPDSGFSANIEDINEAD LVRPVSSPRTWNVLPSPRAGL\EGP\LLASDFGPVQNYSSPVV \SSMP\ERASGS\SSGEKGG\YEIFVKVKTHEKSKKNKNRDKG EKEKKRDSSLRSRSKRSKSEHKSRKLTSESRSRARKRSKSKS HRS\QTRSRSR/RRRRRSR SRSGRGRSVSKEKRKRS PKH RSKSRERKRKRSSSRDNRTVRARSRTPSRRSRSTPSRRSR SVGRRRSFSISPSRRSRTPSRRSRTPSRRSRTPSRRSRTPSRRS RTPSRRSRTPSRRSRSVRRRSFSISPVRLRRSRTPLRRRFS RSPIRKRKRSSSERGRSPKRLTDLDAQLLEIAKANAAAMCAKA GVPPLPNLKPAPPTIEEKVAKKSGGATIEELTEKCKQIAQSKE DDDIVNKPHSVDEEEEEPPFYHHPFKLSEPKPIFFNLNIAAK PTPPKSQVTLTKFPPVSSGSQHRKKEADSVYGEWVPVEKNGEEN KDDNVFSSNLPSEFVDISTAMSERALAQKRLSENAPDLEAMSM LNRAQERIDAWAQLNSIPGQFTGSTGVQLTQEQBLANTGAQAWI KKDQFLRAAPVTGGMGAVLMRKMGWREGGLGNKEGNKEPIILV DFKTDRKGLVAVGERAQKRSNGFSAAMKDLSGKHPVSALMEICN KRWQPPPEFLLVHDSGPDHKKHFLFRVLINGSAYQPNCMFFINR Y |
| 5783 | 1693 | 698 | DSGLRVAFTEMGISNFKTPSKLSEKKKSVLCSTPTINIPASPFM QKLFGTGVNVYLMKRSRGLSHSPWAVKKINPICNDHYRSVYQ KRLMDEAKILKSLHHPNIVGYRAFTEANDGSLCLAMEYGGKSL NDLIEE/PI*SQ/PKILFQQP/LILKVALNMARGLYLHQEKKL |

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|------------|--|--|---|
| | | | LHGDIKSSNVVIRKGFETIKICDVGVSLPLDENMTVTDPEACYI GTEPWKPKEAVEENGVIITDKADIFAFGLTLWEMMTLSIPHINLS NDDDDDEKTFDESDFDDEAYYAALGTRPPINMEELDESQYQKVE LFSVCTNEDPKDRPSAAHIVEALETDV |
| 5784 | 2669 | 1388 | PRVRPRVRTDHNYISRIYGPSDSASRDVLWNIDQMEKDKVKIH GILSNTHRQAARVNLSFDFPFYGHFLREITVATGGFIYTGEVVH RMLTATQYIAPLMANFDPVSVRNSTVRYFDNGTALVVQWDHVL QDNYNLGSFTFQATLLMDGRIIFGYKEIPVLVTQISSTNHPVKV GLSDAFVVVHRIQQIPNVRRRTIYEYHVELQMSKITNISAVEM TPLPTCLOFNRCGFCVSSQIGFNCWSCSKLQRCSSGFDHRQDW VDSGCPEESKEKMCENTEPVET\FLEPPQP*ERQPPSSGS*LPP E/DAVTSQFPPTSLPTEDDTKIALHLKDNASTDDSAEKKGGTL HAGLIVGILILVLIVATAILVTVMYHHPTSAASIFFIERRPSR WPAMKFRRGSGHPAYAEVEPVGEKEGFIVSEQC |
| 5785 | 2669 | 1388 | PRVRPRVRTDHNYISRIYGPSDSASRDVLWNIDQMEKDKVKIH GILSNTHRQAARVNLSFDFPFYGHFLREITVATGGFIYTGEVVH RMLTATQYIAPLMANFDPVSVRNSTVRYFDNGTALVVQWDHVL QDNYNLGSFTFQATLLMDGRIIFGYKEIPVLVTQISSTNHPVKV GLSDAFVVVHRIQQIPNVRRRTIYEYHVELQMSKITNISAVEM TPLPTCLOFNRCGFCVSSQIGFNCWSCSKLQRCSSGFDHRQDW VDSGCPEESKEKMCENTEPVET\FLEPPQP*ERQPPSSGS*LPP E/DAVTSQFPPTSLPTEDDTKIALHLKDNASTDDSAEKKGGTL HAGLIVGILILVLIVATAILVTVMYHHPTSAASIFFIERRPSR WPAMKFRRGSGHPAYAEVEPVGEKEGFIVSEQC |
| 5786 | 2532 | 1674 | SYKLPAEAERRASSCSQPTPTRRRWPAGRTSRGHRFQM*SGTP APRPPARSTVSPASPLPKPRAGRCGSRPSACSTFRFC*SLN*M S*H*KRNLSQRSSSMRRLPLSCARPHR**RQGLTVAARLPWAK SPPLACSFCAQAQKSQSLSSGRSTR*PERMSFRP/SPPGNPAIP SLAPSSRP/PKGRPQCTWIPSRWPASPTAPPTTT*APTSSPGST GRSMMTCPTRTWATPWSARASSRPRNWPPT*WRPSGRLSTV*RA TGGSTATAPPKRFRPNWNPMMAE |
| 5787 | 2 | 1460 | MASAASVTSLADEVNCP\ICQGTLEAGSLSNCG/HKNFCRACL T\RYCEIP/GPD\LEESP\TCP\LCKEPPRP/GSFRPNWQLANV VENIERLQLVSTLGLGEEDVCQEHGEKIYFFCEDDEMQLCVVCR EAGEHATHMRFLEDAA\APYREQIHKCLKLIEREEIQEIQS RENKRMQVLLTQVSTKRQVISEFAHLRKFLBEEQQSILLAQLES QDGDILRQRDEFDLLVAGEICRFSALIEELEBKNERPARELLTD IRSTLIRCETRKCRKPVAVSPBLGQRIRDFPQQALPLQREBMKF LEKLCFELDYBPAHISLDPQTSHPKLLLSBDHQAQFQSYKQNS PDNPQRFDRATCVLAHTGITGGRHTWVVSIDLAHGGSCITGVVS EDVQRKGELRLRPEEGVWAVRLAWGFVSALGSFP\TRTLTKEQP RQVRVSLDYEVGWVTFINAVTREPIYTTASFTKRVIPFFGLWG RGSSFSLS |
| 5788 | 2 | 6860 | EHVSVGRSSAYGDATAEGHPAGPGSVSSSTGAISTTTGHQEGDG SEGEGETEGDVHTSNRLHMLRLLERLLQTLPLQRLNVGGVR AIPYMQVILMLTTDLGDEKDKGALDNLSQLIAELGMDKDV SKKNERSALNEVHLMVRLSVFMSRTKSGSKSSCESSSLISS ATAAALLSSGAVDYCLHVLKSLLEYWKSQONDEEPVATSQLLKP HTTSSPPDMSPPFLROYVKGAADVFEAYTQLLTEMVLRPLPYQI KKITDINSRIPPPVDHWSFYFLSEYLMIQQTTPFVRRQVRKLL FICGSKEKYRQLRDLHTLDS\HVRGIKKLLEEQGIFLRASVVT SPQSALQYDITLISLMEHLKACAEIAAQRTINWQKFCIKDDSVLY FLLQVSPFLVDEGVSPVLLQLLSCALCGSKVLRAAASSGSSSS SSPAPVAASSGQATTQSKSSTKSKKEKEKEKDGGETSGSQEDQ LCTALVNQLNKFADKETLIQFLRCFLLESNSSSVRWQAHLCLTH IYRNSSKSQOELLDDLMWSIWPELPAYGRKAAQFVLLGYFSLK TPQTEKKLKEYSQKAVEILRTQNHLTNHPNSNIYNTLSGLVEF DGYLESDDPCLVCNNPEVPFCYIKLSSI KVDTRYTTTQQVVKLI GSHTISKVTVKIGDLKRTKMVRTINLYNNRTVQAIVELKNKPA RWHKAKVQLTPGQTEVKIDLPPIVASNLMIBFADFVINYQAS TETLQCPRCASVPEANPGVCGNCGENVYQCHKCRSINYDEKDFP |

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|------------|--|--|--|
| | | | LCNACGFCYARFDFMLYAKPCCAVDPIENEEDRKKAVSNINTL LDKADRVYHQLMGHRPQLENLLCKVNEAAPEKPDSDSGTAGGIS STSASVNRYYILQLAQEYCGDCCKNSFDELSKIIQKVFASRKELLE YDLQOREAATKSSRTSVQPTFTASQYRALSVLGCGHTSSSTKCYG CASAVTEHCITLLRALATNPALRHILVSQGLIRELFDYNLRRGA AAMREEVRQLMCLLTRDNPEATQQMNDLIIGXVSTALKGHWANP DLASSLQYEMLLLTDSSISKEDSCWELRLRCALSLFLMAVNKTTP VVVENITLMCLRLILQKLIKPPAPTSSKKNDVPVEALTTVKPYCN EIIHAQAQLWLKRDPKASYDAWKCLPIRGIDNGKAPSKSELRH LYLTEKYVWRWKQFLSRRGKRTSPLDLKLGHNNWLRLQVLFPTAT QAARQAACTIVEALATIPSRKQQLDLSYLDLSIAGECAAE YLALYQKLITSAHWKVYLAARGVLPYVGNLITKEIARLLALEEA TLSTDLOQQYALKSLTGLSSFFVEVESTKRHFKSRLVGTVLNGY LCLRKLVLVQRTKLIDETQDMLLEMDMTTGTESETKAFMAVCI ETAKRYNLDYRTPVFI FERLCSIIYPEENEVTEFFVTLEKDPQ QEDFLQGRMPGNPYSSNEPGIGPLMRDIKNKICQDCDLVALLED DSGMELLVNKIIISLDLPVAEYKVKVCTTNEGEPRIIVYMRG LLGDATBEFIESLDSTTDEEEDEEEVYKMAVGMAQCGGLECMNL RLAGIRDFKQGRHLLTVLLKLFSCYKVKVNRQQLVKLEMMNTLN VMLGTLNLALVAEQESKDSGGAABAEQVLSIMEI\IQAEPNVEP LSEDKGNLLLTGDKDQVLMLLDQINSTFVRSNPSVLQGLLRITP YLSFGEVEKMQILVERFKPYCNFDKYDEHSGDDKVF\DCFC IAAGIK\NNSNGHQL\KDL\ILQKGITONALD\YMKKHIP\SAA RIWDADI\WKSFCRLPALPFILRLRLGLAIQHPGTQVLIQTDISI PNLHKLEQVS\SDGIGITLA\ENL\LESLEHDPVNKKIDA\AR RETRAEEKRMAMAMRQKALGTG\MTNEKQVVD/TRTALLEA DWEELIEEP\GLTCCICREGYKFQPTKVLGIYTFTRVVLGGVW ENKPRETSRATSTVSHFNIVHYDC\HLA\AVSLARGREEWESAA LQNAVTKCNGLLFPVWGPVHPESAPATCLARHNTYLQECTQOREP TYQLNIHDIKLLFLRFAMEQSFADTGGGGRESNIHLIPIYIHT GLYVLNTTRATSREEKNLQGFLEQPKKEKWESAFEVDGPYYFTV LALHILPPEQWRATRVIELRRLVTSOARAVAPGGATRLTDKAV KDYSAYRSSLLFWALVDLIYNMFKKVPTSNTEGGWSCSLAEYIR HNDMPIYEAADKALKTFQEEFMPVETFSFELDVAGLLSEITDPE SFLKDLLNSVP |
| 5789 | 1 | 2407 | LPLHAVEKTGRPGQPALMKPKLRSRDLGLESDTAMKKGETLRKQ TEBEKKEKPKSDKTEEIEABEEETVFPKAKQVKKKAEPSEVDMN SPKSKAKK\KEEPSQNDISPTKSLRKKKEPIEKKVVSSTKKK VTKNEEPSEEEIDAPKPKMKKKEKEMNGETREKSPKLKNGFPHF EPDCNPSEAAESESEIEQEIPEVQKEG\AFSNFPISEETIKL LKGRGVTFLEFPIQAKTFHIVYSGKDLIAQARTGTGKTFSFAIPL IEKLHG\ELQDRKGRAPQVLVLAPTRELANQVSKDFSITKKL SVACFYGGTPYGGQFERMRNGIDILVGTGRIKDHQNGKLDLT KLNHVVLDEVDQMLDMGFADQVEEILSVAYKKDSEDNPQTLLFS ATCPHWVFNVAKKYMKSTYEQVDLIGKKTQKTAITVEHLAKCH WTQRAAVIGDVIRVYSGHQGRTIIFCETKKEAQLSQNSAIKQD AQSLHGDIPQKQREITLKGFRNGSFGVLVATNVAARGLDIPEVD LVIQSSPPKDVESYIHRSGRTGRAGRTGVCICFYQHKEEYQLVQ VEQKAGIKFKRIGVPSATEI IKASSKDAIRLLDSVPPTAISHPK QSAEKLEIEKGAVEALAAALAHISGATSDQSRSLINSNVGFVTM ILQCSIEMPNISYAWKELKEQLGEEIDSKVGMVFLKGLGVCF DVPTASVTEIQEKWHSRRWQLSVATEQPELEGPREGYGGFRGQ REGSRGFRGQDRGNRRFRGQREGSRGPRGQSRGGGKNSNRSONK GQKRSFSKAFQ |
| 5790 | 3786 | 1585 | ARRQRDPLQALRRRNQELKQVDSLLSESQKLEALEPNKRQHIY QRCIQKLQAIKENKNALQKLSKADESAPVANYNQRKEEBHTLLD KLITQQLQGLAVTISRENITEVGAPTEEESESEDSGGE DAEBEEEEKEENESHKWTGEEYIAGVDPTAQVGDITFKKGEI LLVIEKKPDGWWIAKDAKAGNEGLVPTYLEPYSEEEGQESSEE GSEEDVEAVDETADGAEVK\QRTDPHWSAVQKAISEAGIFCLVN HVSFCYLIIVLMNRNMETVEDTINGSETGFRAWNVQSRGRIFLVSK |

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|------------|--|--|---|
| | | | PVLQQINTVDVLTMTGAIPAGFRPSTLSQLLEECNQFRANYFLO PELMPSQLAFRDLMDATEGTIRSRPSRISLILTLWSCKMIPLP GMSIQVLSRHVRLCLFDGNKVLNIIHTRATWQPKPKTWTFSF QVTRILPCLLDGDCFIRSNASPOLGILFELGISYIRNSTGERG ELSCGWVFLKLFDAAGVPIPAKTYELFLNGGTPYEKGIQVDPST SRRAGHSVFYQIMTMRQQLLVKLRSLNRRSRNVLSLLPETLI GNMCSIHLILFYRQILGDVLLKDRMSLQSTDLISHPMLATFEML LEQPDVMDALRSSWAGQES\TLKRSEK\PKSEFLKVPFLLVYH \GCVLPPL/HTPTRLPPFRWABEETETARWKVITDFLKQNGENQ GALQALLSPDGVHEPFDLSEQTYDFLGEMRNNAV |
| 5791 | 3 | 1636 | LRVAEFAGTSR/TGAGLIQPLHRAPARDHGLRGGAAPALSVSH GN/GKQL/AMSSQGSDDQIKRENIRSLTMSGHVGFESLPDQLV NRSQQGFCFNILCVGETGIGKSTLIDTLFNTNFEDYESSHFCP NVKLKAQTYELQESNVQLKLTIVNTVGFQDQINKEESYQPIVDY IDAQFEAYLQEEELKIKRSLFTYHDSRIHVCLYFISPTGHSKLT DLLTMKNLDSKVYIIPVIAKADTVSKTELQKFKIKLMSSELVSN VQIYQFPDDEDTIAKVNAAMNGQLPFAVVGSMDEVKVGKMKVKA RQYPWGVVQVENENHCDVFKLREMLICTNMEDLREQTHTRHYEL YRRCKLEEMGFTDVGPNKPVSVQETVEAKRHEFHGERQRKEEE MKQMFVQRVKEKAILKEAERELQAKFEHLKRLHQBERMKLEEK RRLLEEEI IAFSKKATSEIFHSQSFLATGSNLRKDKDRKNSQF FVKQKVEHRRSSSQANFIKKKLEVCDFAVICFITSIFGEQPO LLIFMEKYFOVQOQYISQSE |
| 5792 | 2263 | 653 | AAAAPSPAWWCGVFVVVVVHTCWVYMGIVYTRPCSGDASCTQPY LARRPKLQL\RHSFTTTRSHLGAENNIDLVLNVEDFDVESKFER TVNVSPKKTRNNGTLYAYIFLHHAGVLPWHDGKQVHLVSPLETT YMPKPEEINLLTGESDTQQIEADKKPTSALDEPVSHWRRLAL NVMADNFVFDGSSLPADVHRVMKMIQ\GKTVHYLPILFIDQLSN RVKDLVINRSTTELPLTVSYDKVSLGRRLRFWIHMQDAVYSLQQ FGFSEKDADEVKGFIVDTNLYFLALTFVFAAFHLLDFDLAFKND ISFWKKKSMIGMSTKAVLWRCFSTVVI FLFLDEQTSLLVLVLP AGVGAAIELWKVKALKMTIFWRGLMPEFQFGTYSESERKTEBY DTQAMKYL SYLLYPLCVGGAVYSLNLIKYSWYSLNINSFVNGV YAFGFLFMLPQLFVNYKLKSAHLPWKAFTYKAFNTFIDDVFAF IITMPTSHRLACFRDDVFLVLYQRWLYPVDKRRVNEFGESYE EKATRAPHTD |
| 5793 | 2263 | 653 | AAAAPSPAWWCGVFVVVVVHTCWVYMGIVYTRPCSGDASCTQPY LARRPKLQL\RHSFTTTRSHLGAENNIDLVLNVEDFDVESKFER TVNVSPKKTRNNGTLYAYIFLHHAGVLPWHDGKQVHLVSPLETT YMPKPEEINLLTGESDTQQIEADKKPTSALDEPVSHWRRLAL NVMADNFVFDGSSLPADVHRVMKMIQ\GKTVHYLPILFIDQLSN RVKDLVINRSTTELPLTVSYDKVSLGRRLRFWIHMQDAVYSLQQ FGFSEKDADEVKGFIVDTNLYFLALTFVFAAFHLLDFDLAFKND ISFWKKKSMIGMSTKAVLWRCFSTVVI FLFLDEQTSLLVLVLP AGVGAAIELWKVKALKMTIFWRGLMPEFQFGTYSESERKTEBY DTQAMKYL SYLLYPLCVGGAVYSLNLIKYSWYSLNINSFVNGV YAFGFLFMLPQLFVNYKLKSAHLPWKAFTYKAFNTFIDDVFAF IITMPTSHRLACFRDDVFLVLYQRWLYPVDKRRVNEFGESYE EKATRAPHTD |
| 5794 | 1 | 5016 | MGPRLSVWLLLLPAALLLHEEHSRAAAKGGCAGSGCGKCDCHGV KGQKGBRGLPGLQGVIGFPGMQGPEGPGQPPGQKQDTEGPGLP TKGTRGPPGAGSGYPGNPGLPGIPGQDGP GPPGPGPGCNGTKGER GPLGPPGLPGFAGNPGPPGLPGMKGDPGEILGHVPGMLLKSERG FPGIPGTPGPPGLPGLQGPVGGPPGFTGPPGPPGPPGPPGEGQM GLSFQGPKGDKGQGVSGPPGVPGQAQVQKGDFAKGEKQKQKQ EPGFQGMPPGVGEKGEPPGPKPGKPGKDGDKGEKSGPGFPGE YPLIGRQGP\QGEKGEAGPPGPPGIVIGTGPLGEKGERGYPGT PGPRGEPGPKGFPGLPGQPPGLPVPGQAGAPGFPGERGEKGD RGFPGLSLPGSGRDGLPGPPGSGPPGPGPYTNGIVECQPGPP GDQGPPIPGQPGFIGEIGEKQKGESCLICDIDGYRGP GPPGQ PPGEIGFPGPGAKGDRGLPGRDGVAGVPGPPGTPGLIGQPGAK |

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|------------|--|--|---|
| | | | <p>GEPGEFYFDLRLKGDGDPGFPQPGMPGRAGSPGRDGHPLPG PKGSPGSGVLKGERGPPGGVGFPGSRGDTGPPGPPGYGPAGPIG DKGQAGFPCCPGSPCLPGPKGEPGKIIVPLPGPPGABGLPGSPGF PGPQGDGRGFPPTPGR\PGL\PGEKGAVG\QPGIGFPGPPGPKGV DGLPGDMGPPPTPGRPGFNGLPGNPGVQGGKGEPPGVLPGLKGL PGLPGIPGTPEKGSIGVPGVPGHGAIGPPGLQIRGEPGPPG LPGSVSGPVGPIGPPGARGPPCGQPPGLSGPPGIKGEKGFPG PGLDMPGPKGDKGAQGLPGITGQSGPLPGLPGQQGAPGIPGFP SKGEMGVMGTPGQPGSPGPWGAPGLPGEKGD\HGFPSSGPRGD PGLKGDGKDVGLPGKFGSMDKVMGSMKGQKGDQGEKQIGPIG EXGSRGDPGTPGVPGKDGQAGQPGQPGKDPGISGTPGAPGLP GPKGSGVMGMLPGTPGEGKGVPIPGQSGPLPGDKGAKGKQG AGFPPIGIPGLRGEKGDQGIAGFPSPGEGKEKSGIGIPMPGS PGLKGSPPGSGVPGSPGLPGEKGDGKLPGLDGIPIGVKGAGLPG TPGPTGPAQKGEPPGSDGIPGSAGEKGEPLPGRGFPFGPAK DKGSKGEVGFPLAGSPGIPGSKGEQGFMGFPQPGQPPGLPGSP GHATEGPKGDRGPPQGPGLPGLPGPMGPPGLPGIDGVKDGKGNP GWPGAPGVPGPKGDPGFGQMPGIGGSPGIIGSKGDMGPPGVPGF QGPGLPGLQGIKGDQDQGVPGAKGLPGPPGPPGPIYDIKGEF GLPGPEGPPGLKGLQGLPGPKGQGVGTGLVGIPIPPGIPGFDGA PGQKCGMGPAGTGPGRGFPGPPGPDGLPGSMGPPGTPSVDHGFL VTRHSQTIDDPQCPSTKILYHGYSLLYVQGNRAHGDQDGLTAG SCLRFSTMPFLFCNINNVNCFASRNDYSYWLSTPEPMPMSMAP ITGENIRPFISRCACEAPAMVMAVHSQTIQIPPCPSGWSLWI GYSFVMTSAGAEGSGQALASPGSCLEEFPSAPFIECHGRGTCTN YYANAYSFWLATIERSEMFKKPTPSTLKAGELRTHVSRQVCMR RT</p> |
| 5795 | 1192 | 61 | <p>STRSPTEVEYISAHPHILFMLLKGYEAPQIALRCGIMLRECIRHE PLAKIILFSNQFRDFKYVELSTFDIASDAFATFKDLLTRHKVL VADFLQNYDTIFEDYEKLLQSENYVTKRQSLKLLGELILDRHN FAIMTKYISKPENLKLMMNLLRDKSPNIQFEAPHVFKVFPVAPH KTQPIVEILLKNQPKLIEFLSSFKERTDDEQFADEKNYLIKQI RDLKKITAP*RALRDSKR</p> |
| 5796 | 2 | 1078 | <p>GRVGWELWCMYISPPKDWWDAGDPSLPRTIPAMIGCSFVNNRKF FGEIGLLDPGMDVYGGENIELGIKWLCCGSGMEVLPCSRVAHIE RKKKPYNSNIGFYTKRNALRVAEVMDDYKSHVYIAWNLPLENP GIDIGDVSERRALRSLKCKNFQWYLDHVPYEMRRYNNITVAYGE LRNNAKADVCLDQGPLNHTAILYPCHWGPPQLARYTKEGFLHL GALGTTTLLPDTRCLVDNSKSLPQLLDCDKVXSSLYKRWNFQ NGAIMNKGTRGRCLVENRGLAGIDLILRSCTGQRWTIKNSIK*R EGAGALEPGPQDMAAPPNIWTSCEPGETARGRQVLDGPPRASFG QHRDPG</p> |
| 5797 | 2 | 891 | <p>PRVRQKTLVDVTLNENSIKQDQIRNLQQTYEASMDKLEKQRQLE VAQVENQLLKMKESSQEANAEMVREMTKKLYSQYEEKLQEEQR KHSAEKEALLEETNSFLKATIRANKKMQAAEISLEEKDQIRIGEL DRLIERMEKERHQLQLQLEHETEMSGELTDSKERYQCLEEAS ASLRERIRHLNDMVHCQQKKVKQMVEEIESLKKKLQKQLLILQ LLEKISFLEGENNELQSRDLDTETQAKTEVE*REIGVGCDDL SQTGRTREIVMPSRNYTPYTRVLELTMMKTLT</p> |
| 5798 | 644 | 115 | <p>KILGSRWKSMSNQEKQPYEEQARLSKIHLEKYPNYKYKPRPKR TCIVDGGKLRIGYKQLMRSRQEMRQFFTVGQQPQIPITTTGTG VVYPGAIITATTTSPQMTSDCSSTSAEPEPSLPVIOSTYGMKT DGGSLAGNEMINGEDEMEMYDDYEDDPKSDYSSENEAPEAVSAN</p> |
| 5799 | 2679 | 1435 | <p>LLSTYIKFINLFPETKATIQGVLRAGSQLRNADVQLQRAVEYFL TLSSVASTDVLATVLEBMPFFPERESSILAKLKRKKGPGAGSAL DDGRRDPSSNDINGCMBETPSTVSTPSPSADLLGLRAAPPAPAP PASAGAGNLLVDVFGPAAQPSLGPTPEEAFSPGPEIDGPPIP EADBLNKFVCKNNGVLFENQLLQIGVKSEFRQNLGRMYLFYGN KTSVQFQNFSPPTVHPGLDQTLAVQTKRVAQVQDGAQVQVQL NIECLRDFTPLPILLSVFRYGGAPQALTLKLPVTINKFFQPTM AAQDFFRQWKQLSLPQCEAQKIFKANHPMDAEVTKAKLLGFGSA</p> |

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|------------|--|--|--|
| | | | LLDNVDPNPENFVGAGIIQTAKLQVGCLLRLEPNAQAQMYRLTLRTSKEPVSRLHCELLAQOF |
| 5800 | 2679 | 1435 | LLSTYIKFINLFFPETKATIQGVLRAGSQLRNADVQLQRAVEYLTLSVASTDVLATVLEEMPPFPERESSILAKLRKKGPGAGSALDDGRDPSSNDINGGMEPTPSTVSTPSPSADLLGLRAAPPAPASPAGAGNLLVDVFDGPAAQPSLGPTPEEAFSPGPEDIGPEIP EADELLNKFVCKNNGVLFENQLLQIGVKSEFRQNLGRMYLPHYGNKTSVQFQNFSPSTVHPGDLQTQLAVQTKRVAQVDGGAQVQVQLNIECLRDFLTPLLSVRFYGGAPQALTCLKLPVTINKFFQPTEMAAQDFQFQWKQLSLPQQEAQKIFKANHPMDAEVTKAKLLGFGSALLDNVDPNPENFVGAGIIQTAKLQVGCLLRLEPNAQAQMYRLTLRTSKEPVSRLHCELLAQOF |
| 5801 | 3 | 1413 | FPRLYHLIPDGEITSIKINRVDPSSELSIRLVGGSETPLVHIIHQHIYRDGVIARDGRLLPGDIILKVNGMDISNVPHNYAVRLLRQPCQVLWLTVMREQKFRSRNNGQAPDAYRPRDDSFHVLNKKSSPEEQGLIKLVRKVDEFGVFIENVLDGGVAYRHGQLEENDRVLAINGHDLRYGSPESAHLIQASERRVHLVVSQRVQRSPDIFQEAQWNSNGSWSPGPGERSNTPKPLHPTITCHEKVVNIQKDPGESLGMTVAGGASHREWDLPYIVISVEPGGVISRDGRIKTGDILLNVGDVELT EYRSSEAVALLKRTSSSTIVLKALEVKEYEPQEDCSSPAALDSNHNMAPPSDWSPSWVMWLELPRCLYNCKDIVLRNTAGSLGFCIVGYEEYNGNKPFFIKSIVEGTPAYNDGIRICGDIILLAVNGRSTSGMIHACLARLLKELKGRITLTIVSWPGTFL |
| 5802 | 3 | 290 | CFSLYQIMERIMDLPTLLRHAFREMFVSGGLFWMFRIRIILCLMGAFYYLISPLDFVPEALFGILGFLDDFFVIFLLLIYISIMYREVITQRLTR |
| 5803 | 2234 | 1299 | EAQFGTTAEIYAYREEQDFGIEIVKVAIGRQRFKVLRLTQSDGIIQAKVQILPECVLPSTMSAVQLESLNKCQFPSPKPVSRBDQCSYKWWQKVKQRKFKCANLTSWPRWLYSLYDAETLMDRIKKQLREWDENLKDDSLPSNPIDFSYRVAACLPIDDLVIRQLLKIGSAIQRLCELDIMNKCTSLCCKQCQETETITKNEIFSLSCGPMAYVNPHGIVHETLTIVYKACNLNLIGRPSTEHSWFPGYANTVAQCKICASHIGWKFTATKKDMSPOKFWGLTRSALEPTIPDTEDEISPDKVI LCL |
| 5804 | 2 | 1707 | EMEQRQEEQRKRETEERKRRIEQDMLEKRIQRELAKEAEQIEDINNTGTESASEGDDSLITVVPVKS YKTSKMKKNFEDLEKE RBEKERIKYEEDKRIRYEEQRP SLKBAKCLSLVMDDEIESEAKKESLSPGKLKLTFEELERQQRNKKQAEBAKRLLEEKRAFEEARRQMVNEDEENQDTAKIFKGYRPGKLKLSFEEMERQRREDEKRAEEBAARRIEEEKKAFAEARRNMVDDDSPEMYXTISQEFLLTPGKLEINFEELLQKQMBEEKRRTTEERKHKLEMEKQEFQERQEMGEEEEENETFGLSREYEBELIKLKRSGSIQAKNLKSKFEKIGQLSEKEIQKKTEERARRRAIDLEIKEREAENFHEEDVDVRPARKSEAPFTHKVMKARFEQMAKAREEEQRRIEQKLRLMQPEQREIDAAALQKKREEEEEEBEGSIMNGSTAEDDEQTRSGAPWFKKPLKNTSVVDSEPVRFVTVKVTGEPKPEITWWFEGEILQDGEDYQYIERGETYCLYLPETFPEDGGEYMCKAVNKGSAASTCILTIESKN |
| 5805 | 3 | 776 | YISDTLQVYKSKIRWWIEENGNGNISVDDLIALLDLAEHASSAFKESQQQSEDREYEVKERLYPKSKRRYDTYNIAGYQGEIEVGLYTIQILQLIPFFDNKNELSKRYMVNFVSGSSDIPGDPNNBYKLA LKNYIPYLTCLKFSLKKSDFDFDEYFVLLKPRNNIKQNEBAKTRKRVAGYFKKYVDIFCLLEESQNNTGLGSKFSRPLQVERCRRNLV ALKADKFSGLLEYLIKQEDAISTMKCIVNEYTFLLK |
| 5806 | 1257 | 877 | AVTTFHNGHRTANLYSLHSLWGITTVFLFACQRFGLFAVFLLPWASMWLRSLKLPITHVFFGAAILSLSIASVISGINKLFFSLKNTT RPVHSLPSEAVFANSTGMLVVAFGLLVLYILLASSWKRP |
| 5807 | 2267 | 1302 | RFSKKTFRPMAVDIQPACGLGYCGRTLLFKNGSTETIYGECGVCPRQRTNAQKYCQPCTESPELYDWLYLGFMAMLPLVLHWFIEWYSGCKSSSALFQHITALFECMAAIITLLVSDPVGVLVYRSCRVLMLSDWYTMLYNPSPDYVTVHCTHEAVYPLYTIVFIYAFCLV |

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|------------|--|--|--|
| | | | LMMLLRPLLVKKIACGLGKSDRFKSIYAALYFPFILTTLVQLQAVGG GLLYYAFPPYIILVLSLVTILAVYMSASEIENCYDLLVRKKRLIVL FSHWLLHAYGIIISIRVDKLEQDLPLLALVPTPALFYLFYFTAKFT EPSRILSEGANGH |
| 5808 | 2 | 433 | SLPDGSGVVEYLSNGGVADNHNKDFGELRYNECLMNFSCNGKNGSS BGRITHGFQKLSAYENNLMPYTNITFDPKGVLDYIFYSKTHMNV IGVLGPLDPQWLVENNITGCPHPHPSDHFSLLTQLELHPPLLP LVNGVHLNRR |
| 5809 | 464 | 2422 | ILVPGFQGIHPCVYCALQSQHQAEQELVADIDECEVSGLCRHHG RCVNTHGSEFCYCMDGYLPRNGPEPFHPTTDDATSCTEIDCGTTP EVPDGYIIGNYTSSLGSGVRYACREGFFSVPEDTVSSCTGLGTW ESPKLHCQEIINCNPPEMRHAILVGNHSSRLGGVARYVCCQEGFE SPGGKITSVCTEKTWRESTLTCTEILTINDVSLFNDTCVRWQ INSRRINPKISYVISIKGQRLDPMESVREETVNLTTDSRTPEVC LALYPGTNYTNISTAPRRSMPAVIGFQTAEDVLDLDDGSEFNI SIFNETCLKNRRSRKVGSEHMYQFTVLGQRYLANFHSATSFN FTTREQVPVCLDLYPTTDYTVNVTLLRSPKRHSVQITITATPPA VKQTISNISGFNETCLRWRSIKTADMEEMYLFIHWGQRWYQKEF AQEMTFNISSSSRDPEVCLDLRPGTNYNVSLRALSSLPVVISL TTQITEPPLPEVEFFTVHRCFLPRLRLRKAKEKNGPISSYQVIV LPLALQSTFSCDSEGASSFFSNASDADGYVAELLAQDVPDDAM EIPIGDRLYYGEYNAPLKRGSDYCIILRITSEWNKVRVRHSCAV WAQVKDSSLMLLMAGVGLGSLAVVILTFLSFAV |
| 5810 | 3 | 1641 | KVFGTHKDEHVSITLDTAISAVKVLAEFLENLQEKSLRIEAFVS EIESFFNTIEENCSKNEKRLEEQNEEMMKVLAQYDEKAQSFEE VKKKKMEFLHEQMVHFLQSMDDAKDTLETIVREAEELDEAVFLT SQEINERLLSAMESSTASLEKMPAFLSEHYDDSSARSQDMLK QVAVPQPPRLEPQEPNSATSTTIAVYWSMNKEDVIDSFQVYVME EPQDDQEVNELVEEYRLTVKESYCI F3DLPEPDRCYQVWMAVNF TGCSLPSERAIFRIAPSTPVIRAEDCTVCWNTATIRWRPTTPEA TETYLEYCRQHSPEGEGLRSPSGIKGLQLKVNLPNDNYFFYV RAINAFGTSEQSEALISTRGTRFLLRETAPALHISSSGTVI SFGERRRLTEIPSVLGEELPSCGQHYWETTVDPCAYRLGICSS SAVQAGALGQGETSWYMHCEPQRYTFYSGIVSDVHVTERPAR VGILLDYNQRLIFINAESQLLFIIRHRFNEGVPFAFALEKPG KCTLHLGLEPPDSVRHK |
| 5811 | 1918 | 851 | AAALADPLPEDKWSAEKRRPLKSSLGYEITFSLNPDPKSHDVY WDIEGAVRRYVQPFNLALGAAGNFSVDSQILYYAMLGVNPRFDS ASSSYLLDMHSLPHVINPVESRLGSSAASLPVLNFFLYVPELA HSPLYIQDKDGA PVATNAFHSRWWGIMVYNVDSKTYNASVLPV RVEVDMVRVMEVFLAQLRLLEFGIAQQLPPLKCLLSGPTSEGLMT WELDRLLWARSVENLATATTTLSLAQLLGKISNIVIKDDVASE VYKAAVQKSAEELASGHLASAFVASQEAVTSSELAFDPDPLL HLLYFPDDQKFAIYIPLFLPMAVPILLSLVKIFLETRKSWRKPE KTD |
| 5812 | 5204 | 2744 | GGQRCQRCRSCGAREBEVEPGTARPPPAASAMDASLEKTDPT LAEMGNLKEAVKMLEDSQRRTEENGKKLISGDI PGPLQSGSQ DMVSIQLVQNLMMHGEDDEEPQSPRIQNIQEGHALLGESLGA YISTLDKEKRLKLTTRILSDTTLWLCRIFRYENGCAFYHHEERE GLAKICRLAIHSRYEDFVVDGFNVLYNKKPVIIYLSAAAREGLGQ YLCNQLGLPFPCLCRVPCNTVFGSQHQMDVAFLEKLIKDDIERG RLPILLVANAGTAAGVHTDKIGRLKELCEQYGIWLHVEGVNLT LALGYVSSSVLAAAKCDSMTMPGPWLGLPAVPAVTLYKHDDPA LTLVAGLTSNKPDKLRALPLWLSLQYLGLDGFVERIKHACQLS QRLQESLKKVNYIKILVEDELSSPVVVFRRFQELPGSDPVFKAV PVPNMTPSGVGRERHSCDALNRWLGEQLKQLVPASGLTVMDLEA EGTCLRFSPMLTAAVLGTRGEDVDQVLVACIESKLPVLCCTQLRL EEFKQEVETAGLLYVDDPNWSGIGVVRVYEHANDDKSSLKSYPO GENIHAGLLKKLNELESDLTFKIGPEYKSMKSCLYVGMASDNVH AELVETIAATAREIEDNSRLLENMTEVVRKGIQEAQVBLQKAS EERLLEGVLRQIPVVGSVLNNFSPVQALQKGRTFNLTAGSLES |

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|------------|--|--|--|
| | | | TEPIYVYKAQGAGVTLPPTPSGSRTKQRLPGQKPFKRSRLRGSDA LSETSSVSHIEDLEKVERLSSGPEQITLEASSTEGHPGAPSPQH TDQTEAFQKGVPHPEDDHDSQVEGPESLR |
| 5813 | 2936 | 699 | HRDGVSGSLERPLTDRSRTGAFQAQQRGKMATAGGGSGADPGSERG LLRLLSFCVLLAGLCRGNVERKIYIPLNKTAPCVRLNATHQI GCQSSISGDTGVTHVVEKEEDLQWVLTGDPNPPYMLLESKHFT RDLMEKLGKRTSRIAGLAVSLTKPSPASGFSVQCPNDGFGVY SNSYGPEFAHCREIQWNSLGNGLAYEDFSFPIFLEDENETKVI KQCQDHNLSQNGSAPTFFLCAMQLFSHMAWLSFSTAT\CMRRS SIQSTFSINPKIVCDPLSDYNVWSMLKEINTTGTTLKPDVVVA ATRLDSRSFFWNV\APGAESAVASFVTQLAAAEALQKAPDVTTL PRNVMFVFFQGETFDYIGSSRMVYDMEKGFVPQLENVDSFVEL GQVALRSTLELWMHTDPVSQKNESVRNQVEDLLATLEKSGAGVP AVILRRPNQSQPLPPSSLQRFLRARNISGVVLADHSGAFHNKYY QSIYDTAENINVSYPBWLPLEKE/ETWNFG*QDTAKALADVATV LGRALYELAGGTNFSDTVQADPQTVTRLLYG\FLIKANNWVQS ILQGRDLRSYLG*RGFLQH\YIAV\SSPTNTIYV/VLQYALANL TGTVVNLTREQCQDPSKVPSENKLDYYSWVQGPLHSNETDRLP RCVRSTARLARALSPAFELSQWSSTYESTWTESRWKDIRARIFL IASKELELITLTVGFGILIFSLIVTYCINAKADVLFIAPREPGA VSY |
| 5814 | 8500 | 432 | ALKCRPRRVLAILVGPVQPDMAEEGAVAVCVRVRPLNSREESL GETAQVYWKTHNNVIYPVDGSKSFNFDRLVHGNETPKNVYEA\I AAPIDSATIQGYNGTIFA\YGQT\ASGKTYTMMGSEDHLGVIPQ GQFHGHFSQKI*EVFLDREFLLRVSYMEIYNBTITDLLCGTQKM KPLI IREDVNRNVYVADLTEEVVYTSEMALKWITKGEKSRHYGE TKMNQRSSRSHITFRMILESREKGEPSNCEGSVKVSHLNLVDLA GSBRAAQTGAGVRLKEGCNINRSLFILGQVIKKLSDGQVGGFI NYRDSKLTRILQNSLGNPKTRI ICTITPVSFDETLTALQFAST AKYMKNTPYVNEVSTDEALLKRYKEIMDLKKQLEEVSLERAQ AMEKDQLAQLLEEKDLLQKVQNEKIENLTRLMLVTSSSLTLQQL KAKRKRRTWCLGKINKMKNYADQFNIPITNITKTHKLS INL LREIDESVCSSESDVFSNTLDTLSEIENWNPATKLLNQENIRSELN SLRADYDNLVLDYEQLRTEKEEMELKLEKNDLDEFALBRKTK KDQEMQLIHEISNLKNLVKHREVVYNQDLENELSSKVELREKED QIKKLQEIYIDSQKLENIKMDLSYSLESIEDPKQMKQTLFPAETV ALDAKRESAFLRSENLELKEKMKELATTYQKMENDIQLVQSQLE AKKKMQVDLEKELQSAFNEITKLTSLIDGXVPKDLLCNLELEGK ITDLQKELNKEVEENEALRREVILSELKSLPSEVERLRKEIQD KSEELHIITSEKDKLFSEVVHKESRVQGLLEEIGTKDKDLATTQ SNYKSTDQEFQNFKTLHMDFEQKYKMLVEENERMNEIYNLSKE AQKFDSSLGALKTELSYKTQELQEKTRVQERLNEMEQLEKEQLE NRDSPLOQTVEREKTLITEKLQQTLEEVKTLTQEKDDLQLOESL QIERDQLKSDIHDVTVMNIDTQEQLRNALSLEKQHQETINTLKS KISEEVSRLHMEENTGETKDEFQKQKMGIDKKQDLEAKNTQTL TADVKNDEIIEQQRKIFSLTQEKNELQQLLESVIAEKEQLKDTL KENIEMTIENQEELRLLGDELKKQQEIVAQEKHAIIKKEGELSR TCDRLAEEVEKLEKESQQLQEKQQLLNQVEEMSEMOKKINIEIE NLKNELKNKELTLBHMETERLELAQKLNENYEBVKSITTKERKVL KELQKSFETERDHLRGYIREIEATGLQTKKEELKIAHILKEHQE TIDELRRSVSEKTAQINTQDLEKSHTKLQEEIPVLHEEQELLP NVKKVSETQETMNELELLTEQSTTKDSTTLARIEMERLRINEKF QESQEIKSLTKERDNLKTIKEALEVKHDQLKEHIRETLAKIQE SQSKQESLNMKEKDNETTKIVSEMEQFKPKDSALLRIEIMLG LSKRLQESHDEMKSVAKEKDDLQRLQEVLSQESDQLKENIKEIV AKHLETEBELKVHACCLKEQEETINELRVNLSKETESTIQKQ LEAINDKLQNKIQEIEYEKEEQNLKIQISEVQEKVNELQKPKER KAKDSALQSIESKMLELTNRLQESQEETIQIMIKEEEMKRVQEA LQIERDQLKENTKEIVAKMKESQEKEYQFLKMTAVNETQEKMC IEHLKEQFETQKLNLENIETENIRLTQILHENLEEMRSVTKERD DLRSVEETLKVVERDQKLENLRETITRDLEKQELKIVHMLKEH |

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|------------|--|--|--|
| | | | QETIDKLRGIVSEKTNESNMQKDLEHSNDALKAQDLKIQEELR IAHMHLEKEQETIDKLRGIVSEKTDKLSNMQKDLENSNAKLQEK IQ3LKANEHQILITLKKDVNETQKKVSEMEQLKKQIKDQSLTSLK LEIENLNLAQKLHENLEEMKSVMKERDNLRRVEETLKLERDQLK ESLQETKARDLEIQEELKTARMLSKHEKKTVDKLEKISEKTIQ ISDIQKDLKSKDELQKKIQELQKQELQLLRVKEDVNMSSHKKIN EMEQLKKQFEPNYLCKCEMDNFOLTKKLHESLEEIRIVAKERDE LRRIKESLKMEDQFIATLREMIARDQNHQVKPEKRLSDGQQ HLMESLREKCSRIKELLKRYSEMDHVECLNRLSLDEKEIEFH RIMKKLKYVLSYVTKIKEEQHECINKFEMDFIDEVEKQKELLIK IQHLQODCDVPSRELRLDLKLNQNMDLHIEILKDFSESEFPSTIK TEFQQVLSNRKEMTQFLEEWLNTRFDIEKLKNGIQKENDRICQV NNFPNRI IAIMNESTEFERSATISKWEQDLKSLKEKNEKLF KNYQTLKTSLSAGAQVNPTTQDNKNPHVTSRATQLTTEKIRELE NSLHEAKESAMHKESKIIKMKKELEVNDIIAKLQAKVHESNKC LEKTKETIQVLQDKVALGAKPYKEEIEDLKMKGKIDLEKMKNA KEFEKEISATKATVEYQKEVIRLLRENLRSSQQAQDTSVISEHT DPQPSNKPLTCGGSGIVQNTKALILKSEHIREKEISKLKQON EQLIKQKNELLSNNQHLSENEVKTWKERTLKRAHKQVTCEKSPK SPKVTGTASKKKQITPSQCKERNLQDPVPKESPKSCFFDSRSKS LPSPHPVRYFDNSSLGLCPEVQNAGAESVDSQP\GPWARLFQGG DVP\ECKTQ |
| 5815 | 23 | 1460 | SELVMTVQNRESLGLLSFPVMITMVCAHSTNEPSNMSYVKET VDRLKGYDIRLRPDPFGPPVDVGMRIDVASIDMVSEVNDYTL TMYFQOSWKDKRLSYSGIPLNLTLNDRVADQLWVPDITYFLNDKK SFVHGVTVKNRMIRLHPDGTVLYGLRITTTAACMMDLRRYPLDE QNCTLEIESYGYTTDDIEFYWNGGGAUTGVNKLIEFQFSIVDY KMVSKKVEFTTGAYPRLSLSPRLKRNIGYFILQTYMPSTLITIL SWVSFWINYDASARVALGITTVLMTTITSLHRETLPKIPYVK AIDIYLMGCFVVFVFLALLEYAFVNYIFFGKGPOKKGASKQDQSA NEKNKLEMNKVQVDAHGNILLSTLEIRNETSGSEVLTSVSDPKA TMSYDSASIQYRKPLSSRE\A*GRAPDRHGVPSPKGRIRRRAS\ QLKVKIPDLTDVNSIDKWSRMFFPITFSLFNVVYLYVYVH |
| 5816 | 861 | 191 | TSSRSRAAAQEGDAETPGSVERRRGRAGAEDGMSQAPGAPSP TVYHERQRLCAVHALNNVLQQQLFSQEADEICKRLAPDSRL NPHRSLLGTGNYDVNVIMAAQGLGLAAVWDRRPLSQLALPQ VLGLILNLPSPVSLGLSLPLRRRLHWPCL/VTVSYNLDLS K\LRAPGPGGLRTE*GPFLAAALAQGLCEVLLVVTKEVEEK SWLRD |
| 5817 | 851 | 118 | RLFRGPGANRGRSCRGCSGGREPSSGALPKRHCP*PFSPFAAD VMSNTTVPNAPQANSDSMGVYVLGPPFLITLVGVVAVVMYVQK KKRVDRLRHLLPMYSYDPAEELHEAEQELLSMDGDPKV\QAG RVATSTSGCHCWMSRRDLTPLPHPEPGVLDCLGPHLLPLLS GSPCWVLGLHFSLHPPSAASASHALTITSLPPGLLPFVGVELTA HPQALMGRGFFSGMAAGRHLCL |
| 5818 | 3 | 3918 | QALRDLKWI FLVQSFYAVRHTESWKLMTDDQQKIQAFAFDKGD DRRLGKKPIFSSSQQRKQVSDSGDIKIKSWRGNNKKECWSYLS NKKMKSDGLGASGHSSSTNRNSINKTLKQDDVKEKDGTKIASKI TKELKTGGKNVSGKPKTVTKSKTENGDKARLENMSPQVVERSA TAAAAATGQKNLLNGKGVNRQEGQISCARPKVLTGNLNVQAKAK PLKATGKDSPLSIAGPSSRSTDSSMEFSISTECLDEPKENG TEEEKPSGHKLSFCDSPGQMMKNSVDSVKNSTVAIKSRPVSRT NGTSNKKSIHEQDTNVNNSVLKKSVCSEPVQAILKKRGTS NGCTAAQQRKTSTPSNLTQGSQGESPNVSVSSVSRQSDENV AKLDHNTTEKQAPKRMVQVHTALPKVNAKIVAMPKNLQSK KGETLNNKDSKQKMPGQVISTKQPSQRPLKHETSTVQKSMFH DVRDNANKDSVSEQPHKPLINLASEISDAEALQSSCRP\DPQK PLNDQEKELALECQNI SKDKSLKHELESQICLDKSETKFPN HKETDDCAANICCHSVGSDNVNSKFYSTALKYVMSNPENSL NSNPVCDLSDTSAGQIHLISDRENQVGRKDTNKQSSIKCV3DVS LCNPERTINGTLNSAQEDKKSKVPVEGLTIPSKLSDESAMDEDKH |

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|------------|--|--|---|
| | | | <p>ATADSDVSSKCFSGQLSEKNSPKNETSESPESHETPETPFVGH WNLSTGVHLHQRESPESDGTGSATTSSDDIKPRSEDYDAGGSQDDDD GSNDRCISKCGTMLCHDFLGRSSSDTSTPEELKIYDSNLRIEVK MKKQSSNDLFQVNSTSDDEIPRKRPEIWSRSAIVHSRERENIPR GSVQFAQEIDQVSSSADETERSEAENVAENFISINPAPQQFQ GIINLAFEDATENECREFSANKKFKRSVLLSVDECEELGSDEGE VHTPFQASVDSFSPSDVFDGISHEHHGRTCYSRFSRESEBNILE CKQNKGNVSVCKNESTVLDLSSIDSSRKKNQSVSATEKKNITDVL SSRSRQLLRDCKVNNNGSNVENDIQQRSKFLDSVKSQERPCHL DLHQREPNSDIPKNSSTKSLSDFRSQVLPQEGPVKESHSTTTEK ANIALSAGDIDDCDTLAQTRMYDHRPSKTLSPYEMDVLEAFEQ KVESETHVTDMD*DDQHFAKQDWTLLKQLLSEQDSNLDVTNSV PEDLSLAQYLINQTLILLARDSSKPGQITHIDTLNRWSELTSPLD SSASITMASFSSSEDCSPQGEWTILELETOH</p> |
| 5819 | 1 | 5557 | <p>AAAGLLGALHLVMTLVVAAARAERKAFVQSESTIEVLRFDGGL LQTEITLGLSSYQKKSISLYRGNCRPIREFPPMLDFHEQPVGMP KMEKVYLHNPSSE*ITLVSIFATTSHFHASFFQNRKILPGGNT SFDVS/VFLARVVGNVENTLFINTSNHGVFTY\OVFGVGVNPNY RLRPFLGARVTVNSSFPIINIHNPHEFLQVVMYSSGGDIHL ELPTGQQGGTRKLWEIPPYETKGVMRASFSSREADNHTAFIRIK TNASDSTEFIILPVFEVETTPAGIYSSSTEMLDFGTLRQDLPKV INTHLNSGTDKVPITSVRPTPQ\NDAITVHFKEITLKAS\ESK YTKVASISFDASKAKKPSQFSGKITVKAKEKSYSKLEIPYQAEV LDGYLGFDAATLPHIRDSPADPVERPIYLTNTFSFAILIHDVL LPBEAKTMFKVHNFSKPVILLPNESGYIFTLLFMPSTSSMHIDN NILLITNASKFHLPPRVYTGFLDYFVLPKIEERFIDFGVLSAT EASNILFAIINSNPIELAIKSWHIIGDG\LSIELVAVDRGNRTT IISLPECEKSSSSDQSSVTLASGYF\AVFRVKLTAKKL\EGIH DGAIQITTDYEILTIPIVK\AVIAGSLTCSFKHVVLPPSPFGKI VHQSLNIMNSFSQKVKIQIRLSLSEDFVRYKRLRGNKEDLEPG KKSNIANIYFDPGLQCGDHCYVGLPFLSKSEPKVQPGVAMQEDM WDADWDLHQSLFKGWTGIKENSGHRLSATFEVNTDLQKNIISKI TABLSWPSILSSPRHLKPLTNTNCSS\EEEEITLENF/SQDVVPV YVQFIPLALYSNPSVFDKLVSRFNLSKVAKIDLRTLEFQVFRN SAHPLQSSSTGFMEG\LSPHLILNLILKPGEKKS VKK\FTPVHN RTVSSLIIVRNLTVM DAVMVQCGGTENLRVAGKLPGGSSLR FKITEALLKCDTSLKLRPNFTLKRFTKVENTGQLQIHETIE ISGYSCEGYGFKVNCQEFLLSANASRDIILFTPDFTASVIR ELKFITTSSEFVFILNASLPYHMLATCAEALFRPNWELALYII ISGIMSALFLLVIGTA\YLEAQGIWEP\FRRRLS\FEASNPFFD VGRFFDLRRIVGISSEGNLNTLSCDPGHSRGFCGAGGSSSRPSA GSHKQ*GPSGHPSSSHSNRNSADVDDVRAYNSGRTSSMTSAQAA SSQFANKTRPLVDSNTGAQGHSAGRKSKGAKQSQHGSQHHAHS PLEQHPQPPLPPVPQPQEPQPERLSPAPLAHPSPHERASSARH SSESDSITSLIEAMDKDFDHHDSPALEVFTEQPPSPLPKSKGKG KPLQRKVKPPKKQEEKEKKGKGPQEDDELKDSLADDDSSSTTE TSNPDTEPLLKEDTEKQKQKQAMPEKHESEMSQVKQKSKKLLNI KKEIPTDVKPSSELEPYTFPLESKQRRNLPSKIPLPTAMTSGSK SRNAQKTGTSKLVNDRPPALAKFLPNSQELGNTSSSEGEKDS PPEWDSVPVHKPGSSDLSLYKLSLQTLNADIFLKQRQTSPTPAS PSPPAAPCFVARGSYSSIVNSSSSSDPKIKQPNGSKHKLTKAA SLPGKGNMPTFAAVTAGYDKSPGGNGFAKVSNNKTGFSSSLGIS HAPVDSGSDSSGLWSPVSNPSSPDFTPLNSFSAFGNSFNLTGE VFSKGLSRSCNQASQRSWNEFNSGPSYLVESPATDPSPSWPA SGSPHTTATSVLGNTSGLWSTTFSSSIWSSNLSSALPFTTPAN TLASIGLMGTENSPAPAPSTSSPADDLGQTYNPNRIWSPITGR RSSDPWSNSHFPHEN</p> |
| 5820 | 310 | 1270 | <p>RVSLSGVPVSLGVLLCARSSSTMGRDNRVAYMNPIMARSRCPIQ SSGPTIQ\VI*IDQGLPGKK*KSN*KRRK/DSKALAEFEKMN ENWKKLEKHREKLLSGSESSSKRQRKKKEKKKSW*\DSSSS\ SSSSDSSSSSSEDEKQKQKRRKKKKNRSHKSSSESSMSETES</p> |

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|------------|--|--|---|
| | | | DSKDSLKKKKSKDGTETKEKDKIGLSKRRMYSEDKFLSSSESLS ESEYIEEVRAKKKKSEEREKATEKTKKKKKKKHKKKKKKKAA SSSPDSP*H*EKSGFPYKESAMSEESTVTKTTTYLLKCMNFLVF GIIPGLFSSHSDATV |
| 5821 | 179 | 915 | KWRNQSWRWPKPGTNWMLSCSVCWRRVVTWGSVWMKLGKHPQT PT/IKDCSTIAATGKRPSARFPHQRRKKRREMDGLAEGGPQRSN TYVIKLFDRSDLAQFSENTPLYPICRAMMRNSPSVRERECSPS SPLPPLPEDEEG\SEVTNSKSR*CVQACPTHTPGGQPKWACR\ SRIPSPLAALRMQGT*P*RWSPPEPEPSPSTLIYRNMQRWKRIQ RWKEASHRNQLRYSESMKILREMYEQ |
| 5822 | 464 | 4379 | QTLKEMPVIMARDLEETASSEDEEVISQEDHPCIMWTGGCRR PVLVVFHADAILTKDNNIRVIGERYHLSYKIVRTDSRLVRILTA HGFHEVHPSSDYDNLMTGSHLKPFLRLTLSEAQVNHFPERSYE LTRKDRLYKNIIRMQHTHGFKAFHILPQTFLLPAEYAEFCNSYS KDRGPWIVKPVASSRGRG\VYLINPNQISLEENILVSRYYNNP LLIDDFKFDVRLVYLVTSYDPLVIYLYEEGLARFATVRYDQGA NIRNQFMHLTNSVNNKSGDYVSCDDPEVEDYGNKWSMSAMLR LQCEGRDITAMAHVEDLIIKTIISAELAIATACKTFVPHRSSC FELYGFDVLIDSTLKPWLLLEVNLSPLACDAPLDLKIKASMSD MFTVVGFCQDPAQRASTRPIYPTFESSRRNPFQKQRCRPLSA SDAEMKNLVGSAREKPGKLGGSVLGLSMEEIKVLRVRKEBENDR RGGFIRIFPTSETWEYGSYLEHKTSMNYMLATRLFQDRMTADG APELKI*SLNSKAKLHAALYERKLLSLEVRKRRRRSSRLRAMRP KYPVITQPAEMNVKTETESSEEEVALDNEDEEQEASQESAGF LRENQAKYTPSLTALVENTPKENSVMKVRWNNKGGHCCLETQE LEPKFNLMLQILDNGNLSKMQARIAFSAYLQHVQI\RLMKDSGG QTFASAWAKEDQOMELVVRFLKRASNNLQHSRLMVLPSRRLAL LERTRILAHQLGDFIIVYNKETEQAEEKSKKKVEEEEDGVNM ENFQEFIRQASEAELEEVLTFTYQKNKSASVFLGTHSKISKNN NYSDSGAKGDHPETIMEEVKIKPPKQQQTTEIHSKLSRFTTSA EKEAKLVYSNSSSGPTATLQKIPNTHLSSVTTSDLSPGPCHHS LSQIPSAIPSMHQPTILLNTVSASASPCLHPGAQNIPTSGLP RCRSGSHTIGPFSSFSQAHIYSQKLSRPSAKAGSCYLNKHHS GIAKTQKEGEDASLYSKRYNQSMVTAELOIAEKQAARQYSPSS HINLLTQQVTNLNLATGIINRSSASAPPTLRPIISPSGPTWSTQ SDPQAPENHSSSPGSRSLQTGGFAWEGEVENNVYSQATGVVPQH KYHPTAGSYQLQFALQQLQEQKLSRQLLDQSRARHQAIFGSGT LPNSNLWTMNGAGCRISSATASGQKPTTLPQKVVPSSCASL VPKPPNHEQVLRRATSQKASKGSSAEGQ\NLQSSSLNPAAFVP TSSTDPAHTKIMNHKHTKQPVHSHSVHD |
| 5823 | 42 | 2293 | LLTALSMEGGGGRDEPSACRAGDVNMDDPKKEDILLADEKFDF DLSLSSSSANEDDEVFFGPFHGKERCIAASLELNNPVPEQPPLP TSESPFAWSPLAGEKFVEVYKEAHLALHIESSRNQAAQAAKP EDPRSQGVVERFIQESKF\KINLFEKEKEMKKSPTSLKRETYYS DSPLLGPPVGEPRLLASSPALPSSGAQARLTRAPGPPHSAHALP RESCTAHAASQAATQRKPGTKLLLPRAASVVRGRGIPGAEEKPKK EIPASPSRTKIPAEKESHDRDVLDPKPAPGAVNVPAAGSHLGQK RAIPVP\NKLGLKKTLLKAPGSYN\LQRKSSGA\WVSGASSA CTPQPVAKAKSSEFASIPAN*LPGLCPNISKS\GRMGPAMLRPA I\PAQVPG\ASSWQAKRVDVSELAEEQLTAPP\SASPTQPTPE GGG\QWLNSSCAWSESSQLNKTRSIIRRDSCLSKTKVMPTPTN QFKIPKFSIGDS\PDSSTPKLSRAQRPOQCTSVGRVTVHSTPVR RSSGPAPQSLLSAWRVSAALPTPASRRCSGLPPMTFKTMAPRVS PL\CVFARRRSSEPRKNSAMRTEPTRESNRKTDNR\LDVDSR GSPPSRVPAALNFSPEESDSTFSKSTATEVAREEAKPGGDAAPS BALLVDIKLEPLAVTPDAASQPLIDLPLIDFCDTPEAHVAVGSE SRPLIDLMTNTPDMNKNVAKPSPVVGQLIDLSSPLIQLSPADK ENVDSPLLKF |
| 5824 | 42 | 2293 | LLTALSMEGGGGRDEPSACRAGDVNMDDPKKEDILLADEKFDF DLSLSSSSANEDDEVFFGPFHGKERCIAASLELNNPVPEQPPLP TSESPFAWSPLAGEKFVEVYKEAHLALHIESSRNQAAQAAKP |

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|------------|--|--|---|
| | | | EDPRSQGVVERFIQESKF\KINLFEKEKEMKKSPTSLSKRETYVLS DSPLLGPPVGEPRLLASSPALPSSGAQARLTRAPGPPHSAHALP RESCTAHAASQAATQRKPGTKLLLPRAASVVRGRGIPGAAEKPKK EIPASPSRTKIPAEKESHRDVLDPKPAAGVAVNPAAAGSHLGQK RAIPVP\NKLGLKTKLLKAPGSYSN\LQRKSSSGA\VWSGASSA CTPQPVAKAKSSEFASIPAN*LPGLCPNISK\GRMGPAMLRPA L\PAGFVG\ASSWQAKRVDVSELAEEQLTAPP\SASPTQPQTPE GGG\QWLNSSCAWSESSQLNKTRSIIRRDSCLSNKTVMPTPTN QFKIPKFSIGDS\PDSSTPKLSRAQRPSCTSVGRVTVHSTFVR RSSGPAPQSLLSAWRVSALETPASRRCSGLPPMTPTKTPRAVGS RL\CVPARRRSSEPRKNSAMRTEPTRESNRKTDSDR\LVDVSPDR GSPPSRVQALNFSPEESDSTFSKSTATEVAREEAKPGGDAAPS EALLVDIKLEPLAVTPDAASQPLIDLPLIDFCDTPEAHVAVGSE SRPLIDLMTNTPDMMKNVAKPSPVVGQLIDLSSPLIQLSPEADK ENVDSPLLK |
| 5825 | 2 | 4210 | FLQIESASPAPFSSGFLAAHPHSPGGSLATKGRSRLSAPGMLHL SAAPPAPPEVVTATARPCLCSVGRRGDGGKMAAGALERSFVEL SGAERERPRHFREFTVCSIGTANAVAGAVKYESAGFYVYVSG KLFSVTRNRFIHWKTSIGDTLELMEESLDINLNNAIRLKFQNC VLPGGVYVSETQNRVILMLINOTVHRLLLPHPSRMYRSELVVD SQMQSIFTDIGKVDFTDPCNYQLPAVPGISPSTASTAWLSSD GEALFALPCASGGIFVLKLPYDIPGMVSVVELKQSSVMQRLLT GWMPTAIRGDQSPSDRPLSLAVHCEHDAFIFALCQDHLKRMWS YKEQMCLMVADMLEYVPVKDLRLTAGTGHLRLAYSPTMGLYL GIF\MHAPKRGQFCIFQLVSTESNRYSLDHISSLFTSQETLIDF ALTSTDIWALWDAENQTVVKYINFEHNAVAGQWNPVFMQPLPEE EIVRDDQDPREMYLQSLFTPGQFTNEALCKALQIFCRGTERNL DLSWSELKKEVTLAVENELQGSVTEYEFSSQEEFRNLQQEFWCKF YACCLQYQALSHPLALHLNPHTMVCLLKKGYLSFLIPSSLVD HLYLLPYENLLTDETTISDDVDIARDVICLIKCLRLIEESVTV DMSVIMEMSCYNLQSPKAAEQILEDMITIDVENVMEDICSLQ EIRNPIHAIGLLIREMDYETEVEMEKGFNPAQPLNIRMNLTOLY GSNTAGYIVCRGVHKLIASTRFLICRDLILLQLLMRLGDVAVWG TGQLFQAQDQLLHRTAPLLLSYLLIKNGSECLATDVPLDTLESN LQHLVLELTDSCALMANRFVSSPQTIVELFFQEVARKHIIHSL FSQPKAPLSQTGLNWPIMITAITSYLLQLLWPSNPGCLFLECLM GNCQYVQLQDYIQLLHPWCQVNVGSCRFMLGRCYLVTEGQQKAL ECFQAAASEVGEKEFLDLRLIRSEDEIVSTPRLQYVDKVLRLD VIGLPELVIQLATSATEASDDW\KSQATL\RTCIFKHHL\DLG \HNSQAYGSL*PQIPDSSRQLDCLRLVVLVLCERSQLQDLVEFS YVNLHNEVVGIIIESRAVLDLMTNHYELLYAFHIYRHNRYKAG TVMFEYGMRLGREVRTLRGLEKQGNCYLAALNCLRLIRPEYAWI VQPVSGAVYDRPGASPKNRHDGECTAAPTNRQIEILELEDLEKE CSLARIRLTLAQHDPASAVAVAGSSSAEEMVTLVQAGLEDTAIS LCQTFKLPPLTPVFEGLAFKCIKLOFGGEEAAQAEAWAWLAANQLS SVITTKESSATDEAWRLLSYLERKYQNNLYHHCVINKLLSHG VPLENWLINSYKKVDAEELLRLYLNYDLDLTPYQVIRICGC |
| 5826 | 3 | 871 | KSQLLRDHSAPEPKPCTSVGAMGC*FRQ/SEKEQQRQLKKQKNR AAQSRSRQKHTDKADALHQQHESLEKDNLAALRKEIQSLQAEAW WSRTLHVHERLCPMDCASCAPGLGCWDQAEGLGPGCGQHG CREQLBLFQTPGSCYPAQFLSPGPQPHDSPSLLQCPLPSLSLGP AVVAEPVQLSPSPPLFASHTGSSSQGSSKLSALQPSLTAQTA PPQPLBLEHPTRGKLGSSPDNPSSALGLARLQSRHHPALSAAT WQGLVVDPSPHPLAFPLLSAQVHF |
| 5827 | 194 | 2287 | GMGSENSALKSYTLREFFFTLPSGLAVYPAVLQDGKFASVFVYK RENEKVNKAAPV**HLKTLRHPCLLRFLSCTVEADGHLVTE RVQPLEVALETLSAEVCAGIYDILLALIFLHDRGHLTHNNVCL SSVFVSEDGHWKLGGMETVCKVSQATPEFLRSIQSIRDPASIPP EEMSPEFTTLPECHGHARDAFSFGTLVESLLTILNEQVSADVLS SFQQLHSTLLNPIPKWRPALCTLLSHDFFRNDFFLEVNFLLKSL TLKSEEEKTEFFKFLLDVRSCLSEBLIASRLVPLLLNQLVFAEP |

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|------------|--|--|--|
| | | | VAV\KSFLPYLLGPKKDHAQGETPCLLSPALFQSRVTPVLLQLF EVHEEHVRMVL LSHIEAYVGALSREQLKKV\IL\ PQVLLG\LR D\TSDSIVAITLHSLAVLVSLLGPVVGGERTKIFKRTAP\SF TK\NTDLSLEGDPFSQPIKFPINGLSVKNSTSESNFPSSSK SEEWPDWSGPE\EPENQTVNI\QIWP\REP\CDDVKSQCTTLDV EESSWDDCEPSSLDTKVNPGGGITATKPVTSGEQKPIALLSLT EESMPWKSSLPQKISLVQRGDDADQIEPPKVVSSQERPLKVPSEL GLGEEFTIQVKKRPVKDPEDMWFADMIPEIKPSAFLILPELRT EMVPKKDDVSPVMQFSSKFAAAEITEGEAEGWEEEGELNWNEDNN W |
| 5828 | 2 | 257 | AREGGSILGAVAACGELS YSCDFCPARPHTSWLRFRVKMEFQAVV MAVGGGSRMTDLTSSIPKPLLPVGNKPLIWIYPLNLLERVGFEEV IVVTTRDVQKALCAEFKMKMKPDIVCIPDDADMGTADSLRIYIP KLKTDVLVLSCDLITDVALHEVVDFRAYDASLAMLMRKGGQDSI EPVPGQKGGKKAVEQRDFIGVDSTGKRLLFMANEADLDEELVIK GSILQKHPRIRFHTGLVDAHLYCLKKYIVDFLMENG\SITSIRS EL\IPYLV/RGKQFSSASSSQGTRKEKEGGSGKGRGLKSPRISY SFY*KEANYTGTGAPY\D\ACWI |
| 5829 | 260 | 1259 | PDGRLIVCSSEDKTIKTWDTTNKQCVNNFSDSVGFANFVDFNPS GTCIASAGSDQTVKVDVRVNKLLQHYQVHSGGVNCISFHPSGN YLITASSDGTLLKLDLLKGRLIYTLQHTGVPVFTVSFSKGGELF ASGGADTQVLLWRINFDELHCKGLTKRNLKRLHFDSPPHLLDIY PRTPHPEEKVETVEDFFLHLRLRIQSLR*STCRSLPLLLWISF LLILPQQQKPVVGLCQTRVKRPVDIS*TLP*CHQNVCCQPRKRK QKT*VTSVPVKV/VSIPLAVTDALHIMEQLNVLQTQVSIILEQR LTLTEDKLKDCLENQQLFSAVQOKS |
| 5830 | 4496 | 3139 | GGKMAAPEERDLTQEOTEKLLQFQDLTGIESMDQCRHTLEQHNW NIEAAVQDRLNEQEGVPSVFNPSPSRPLQVNTADHRIYSYVVS R PQPRGLLGWGYLIMLPFRFTYTYTILDI FRFALRFIRPDPRSRV TDPVGDIVSFMHSFEEKYGRAHPVFYQGTYSQALNDAKRELRLFL LVYLHGDDHQSDEFCRNTLCAPEVISLINTRMLFWACSTNKPE GYRVSQALRENTYPFLAMIMLKDRRE*PV\VGRLEGLI\QPDDL INQLTFIMDANQTYLVSERLEREERNQTCVLRQQQDEAYLASLR ADQEKERKKREERERKRKKKEEVQQQLAEERRRQNLQEEKERK LECLPPEPSPDDPESVKIIFKLPNDSRVERRFHFQSSLTVIHDF LFSLKESP\EFQIEA\NFPRR\VLPCIPSEE\WPNPPTLQEB\A GLSHTEVLFVQDLTDE |
| 5831 | 71 | 2897 | FCSKDKCCLYLPDSINRSKSCFAPGAHSQDRHAYMDSERQVKD TDDIESPKRSIRDSGYIDCWDSESDSLSPRHGRDSDSFLDS FGSRSRQTPSPDVVLRGSSDGRGSDSES DLPKRKL PDVKKDDMS ARRTSHGEPKSAVPFNQYLPNKSNTAYVPAPLRKKKAERREYR KWSSTATSPAGLGKKALQDYGPRT\ PVS\DDAESTSMFDMRC3E EAAVQPHSRARQEQLQLINNQLREEDDKWQDDLARWKSRRKRSVS QDLIKKEBERKMEKLLAGEDGTSERRKSIKTYREIVQEKERRE RELHEAYKNARSQEEAEGILQYIERFTISEAVLERLEMPKILE RSHSTEPNLSSFLNDPNPMKYLRQQSLPPPKFTATVETTIIARAS VLDTSMSAGSGSPSKTVPKAVPMLTPKPYSPKNSQDVLKTFK VDGKVSVNGETVHREEEKERECPVAPAHSLTKSQMFEQVARVH GSPLELKQDNGSIEINIKKPNVSPQELAAATTEKTEPNSEQBKND GGKSRKGNIELASSEPOHFTTIVTRCSPTVAFVEFPSSPQLKND VSEEDQKKPENEMSGKVELVLSQVVKPKSPPEATLTFFFLD KMPEANQLHLPLNLSQVDSPESEKSPVTTPFKFWAWDPPEERRR QEKWQQBQERLLQERYQ\KEQDK\LKEE\WEKAQKEVEEBEERRY YEEEP*II\EDPVVPFTVSSSSADQLSTSSSMTESGTMNKIDL GNCQDEKQDRRWKKSFGGDDSDLLKTRSDRLEBKGSLETCAL AHSNPNVSGVHEDHQLDTEAGAPHC GTNPQLAQDPSQSQQTSN PTHSSBDVKPTLPLDKSINHQIESPSERRKSI8GKKLCSGCL PLGKGAAMIETLNLFYHIQCFRCG\ICKGQLGDAVSGTDVRI R NGLLNCNDCYMRSSRAGOPTTL |
| 5832 | 2454 | 829 | PGRFRHFGSCAFQKQCIMLHICQYFLQGECKFGTSCKRSHDFSN SENLEKLEKLGMSDDLVSRLPTIYRNAHDIKNKSSAPSRVPLPF |

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|------------|--|--|--|
| | | | VPQGTSEKDDSSGVSVPNTLSQEEGDQICLYHIRKSCSFQDKCH RVHFHLPYRWQFLDRGKWEDLDNMELIEBAYCNPKIERILCSES ASTFHSCLNFNAMYATGATQARRLSTASSVTKPPHFLTDDWIW YWSEDFGSWQEGYGRQGTVHPVTVSSSDVEKAYLAY/WYTGVR*PGSHLEVPGRKAQLRVRFQSLRSEKPGWLHN*KGLPQTQIR/AP QDVTMTQTCNTKFFPGPKSIPDYWDSSALPDGPFQKITLSSSSEE YQKVVNLFNRTLPPFYFVQKIERVQNLALWEVYOWQKQOMQKONG GKAVDERQLFHGTSAIFVDAICQONFDWRVCGVHGTSYKGSYF ARDAAYSHHYSKSDTQTHTMFLARVLVGEFVRGNASGVRPPAKE GWSNAFYDSCVNSVSDPSIFVIFEKHQVYPEYVIQYTTSSKPSV TPSILLALGSLFSSRQ |
| 5833 | 170 | 3289 | SILCLLSPCVVQFGKPVVSISSRSRHSPTCKKGWEGMRKHLHT RQGHK*VHVEISKALWVYRDDYFIRHSISVS AVIVRAWITHKYR GRDWNVWKEENLLHAVAKNYTILLQTIPEFERPFKDHQVCLEWNM GYIWNLRANRIPQCPLNDVVALLGFPYASSGENTGIVKKFPRF RNRELEATRQRMDYPVFTVSLWLYLLHYCKANLCGILYFVDSN EMYGTPSVFLTEEGYLHIQMHVKGEDLAVTKFI IPLKEWFRLL DISFNGGQIVVTTSIGQDLKSYHNQTISFREDFHYNDTAGYFII GGSRYVAGIEGFFGFLKYRLRLSLHPAQIFNPLLEKQLABQIKL YYERCAEVQEI VSVYASAAKHGGERQEACHLHNSYLDLQRRYGR PSMCRAPFWEKELKDKHPSLFCALLEMDLLTVPRNQNESVSEIG KFI FEKAVKRLSSIDGLHQISSIVPFLTDSSCCGYHKASYLAV FYETGLNVPRDQOGMLYSLVGGQGSERLSSMNLGYKHYQGIDN YPLDWELSYAYYSNIATKTPLDQHTLQGLQAYVETIRLKDEIL KVQTKEDGDVFMWLKHEATRGNAQAQRLAQLFWGQQGVAKNP EAAIEWYAKGALETEDPALIYDYAIVLFKGQSVKKNRRLALELM KKAASKGLHQAVNGLGWYHFKKNYA\KAAKYWLKA\BE\MGN PDASYNLGVHLHDGIFPGVPGRNQTLAGEYFHKAAQGGHMEGTL WCSLYYITGNLETFPRDPEKAVVWAKHVAEKNGYLGHVIRKGLN AYLEGSWHEALYYVLAETGIEVSQTNLAHICEERPDLARRYL GVNVCWRYYNFVSFQIDAPSFAYLKMGDLYYGHQNSQDLELS VQMYAQALDGDSDGFFNLALLIEGTIIPHHILDFLEIDSTLH SNNISILQELYERCWSHSNEESFSPCSLAWLYLHLRLLLWGAILH SALIYFLGTFLLSILIAWTQVYFQSVASDPPRPSQASPDAT STASPAVTPAADASDQDQPTVTNNPEPRG |
| 5834 | 17 | 4020 | RFRGGGRVFPFGAFPASPSDSLGGQNSQGPRTPKPPRT/QECG SAAPGPIPGQSSS*VPLRLEIQQKADCPLELALPKPRMAAQV TLEDALSNVDLLEELPLPDQPCIEPPSSLLYQPNFNTNFEDE R NAFVTGIARYIEQATVHSSMNEMLEEGQEYAVMLYTWRSCSRAI PQVKCNEQPNRVEIYEKTVEVLEPEVTKLNMFMFQRNAIERFC GEVRRLLCHAERRKDFVSEAYLITLKGFINMFAVLDELKNMKCSV KNDHSAYKRAAQFLRKMDPQSIQESQNLMSFLANHNKITQSLQ QQLEVISGYEBLLADIVNLCVDYVENRMYLTFSEKHMLLKVMGF GLYLMDGSVSNYKLDKAKRINLSKIDKYFKQLQVVPFLPGDMQI ELARYIKTSAHYEENKSRWCTSSGSSPQYNICEQMIQIREDHM RFISELARYSNSEVVTGSGRQEAQKTDAEYRKLFDLALQQLQLL SQWSAHVMEVYSWKL VHPTDKYSNKCPCDPAEEYERATRYNYTS EEKFPALVEVTIAMIKGLQVLMGRMESVFENHAIRHTVYAAALQDFSQ VTLMEPLRQAIAKKKNVIQSVLQAIRKTVCDWETGHEPFNDPAL RGEKDPKSG*DIKVPRAVGPSSSTQLYMVRTMLES LIADKSGSK KTLRSSLEGPTILDIKPHRESFFVTHLINPSETLQCCDLSQL WREFFFLELTMGRIQFPPIEMSMPWILTDHILETKEASMEYVL YSLDLYNDSAHYALTRFNKQFLYDEIEAEVNLCPDQFVYKLADQ IFAYYKVMAGSLLLDKRLRSECKNQGATIHLPSPNRYETLLKQR HVQQLGRSIDLNRITQRVSAAMYKSLELAIGRFESEDLTSIVE LDGLLEINRMTHKLLSRYLTLDFDAMFREANHNVSAPYGRITL HVFWEFLNYDFLENYCYNGSTNRFTVLPFPQSQEFQDQKQPNAP QYLHGSKALNLAYSSYGSYRNFVGPFPFHQVICRLLGYQGIADV MEELLKVVKSLQGTILQYVKTLMVMPKICRLPRHEYGSPGIL EFFHHQLKDIVEYAEKTVCFQNLREVGNAILFCLLIEQSLSLE EVCDDLHAAPFQNIILPRVHVKEGERLDAKMRLESKYAPLHLVP |

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|------------|--|--|--|
| | | | LIERLGTPQQIATAREGDLTKERLCCGLSMFEVILTRIRSF LD DPIWRGPLPSNGVMHVDCEVEFHRLWSAMQFVYICIPVGTHEFTV EQCFGDGLHWAGCMIIIVLLGQQRRFAVLDFCYHLLKVQKIDGKD EIKNVPLKKMVERIRKFKILNDEIITILDKYLKSGDGEPTPVE HVRCFQPPHQSGLASS |
| 5835 | 4209 | 1904 | SGNIRMAQGSQIDFQVLHDLRQKFPFVPEVVVSRCLQNNNNL DACCAYLSQESTRYLYGEGDLNFSDDSGISGLRNHMTSLNLDLQ SQNIYHHGREGSRMNGSRTLTHSISDGQLQGGQSNSELFQQEPQ TAPAQVPQGFNVFGMSSSSGASNSAPHLGFHLGSKGTSSLSQQT PRFNPI MVTLAPNIQTGRNTP TSLHIHGVPFVLNSPQGN SIYI RPYITTPGGTTRQTQQHSGWVSQFNPMNPQQVYQPSQPGFWTTC PASNP LSHTSQQPNQQGHQTSHVYMPISSPTTSQPPTHSSGS SQSSAHSQYNIQNI STGPRKNQIEIKLEPPQRNNSKLRSSGPR TSSTSSSVNSQTLNRNQPTVYIAASPNTDEIMSRSQPKVYISA NAATGDEQVMRNQPTLFISTNSGASASARNMSGQVSMGPAFIHH HPPKSRAGNNSATSPRVVVTQPNTEYTFKITVSPNKPFAVSP GVVSPTEFELTNLLNHPDHYVETENIHHLTDP TLAHVDRISETR LSMGSDDAAYTQDI *RISNSWLGMAHACNSSALGGQDGR II *A QEFETSWGNIWRLRLYRRF *NYAGMVAHTCSPSYSD *ALLVHQ KARMERLQRELEIQKKLDKLKSEVNEMENLRRRLKRSNSIS QIPSLBEMQQLRSCNRQLQIDIDCLTKEIDL FQARGPHFNPSAI HNFYDNIGFVGPVPPKPKDQRSIIKTPKTQDTEDEGAQWNCCTA CTFLNHPALIRCEQCEMPRHF |
| 5836 | 361 | 2303 | FHITMCGICCSVNFSAEHFSQDLKEDLLYNLQKRGPNSSKQLLK SDVNYQCLFSAHVLHLRGVLTTPQVEDERGNVFLWNGEIFSGIK VEAEENDTQILFNYLSSCKNESEILSLSFSEVQGPWSFIYYQASS HYLWFGDRDFFGRSLLWHFNLGKSFCLSSVGTQTSGLANQWE VPAS\DPSELILSLLSFPDALFYNCILGNIFLGRILLKKMLIA* VKFQQTYYQHL YOR *QMKPNCILKNLFL *I *CCKHLHWRLIAVI FPMCHLQERYFKSFLMYT *KEVIQQFIDVLSVAVKKRVLCPLR DENLTANEVLKTCDRKANVAILFSGGIDSMVIATLADRIPLDE PIDLLNVAFTAEKTMPTTFNREGNKQKNKCEIPSEEFKDVAA AAADSPNKHVSVPDRITGRAGLKELQAVSPSRINWFVEINVSME ELQKLRRTRICHLIRPLDTVLDDSGCAVNFASRGIGWLVAQEG VKSYSQSNKVVLTGIGADEQLAGYSRHRVRFQSHGLEGLNKEIM MELGRISSRNLGRDDRIGDHGKEARFPFLDENVVVSFLNSLP I W EKANLTLPRGIGEKLLRLAAVELGLTASALLPKRAMQFGSR I A KMEKINEKASDKCGR LQIMSLNLSIEKETKL |
| 5837 | 4792 | 903 | NGNAVAQAPVTNCCYLATGSKDQTIRIWSCSRGRGVMITLKL PFL KRRGGGIDPTVKERLWLTTLHWPSNQPTQLVSSCFGBELLQWDLT QSWRRKYTLFSASSEGNHSRIVFNLCPLOTTEDDKQLLLSTSD RDVKCWDIATLECSWTLPSLGGFAYSLAFSSVDIGSLAIGVGDG MIRVWNTLSIKNNYDVKNFWQGVKSKVTALCWHPTKEGCLAFGT DDGKVGLYDYTSNKPQISSTYHKKT VYTLAWGPFVPPMSLGGE GDRPSLALYSCGGEIVLQHNPKWLSGEAFDINKLIRDNTS I KY KLPVHTIISWKADGKIMALGNEDGSIEIFQ\IPNLKLCITIQH HKLVTISWHHE\HGSPAQKLSYL\MPSGSQQCSFFTCHNLKNC P *KAAPESPDPLOSPYRTPPQGHATAQDYPVWAWEPH I H *WGL VFCFPIDGYSFGCWDAFFPGKEAPVAIFRG\HQGRLLCVAWSEL DPDCIYSG\ADDFCVHKWLTSMQD:SRPPQGGKKSIELEKKRLSQ PKAKPKKKKKPTLRTPVKLESIDGNEEESMKENSGPVENGVS DQ EGEEQAREPELPCGLAPAVGREPVICTPVSSGFEKSKVTINNKV ILLKKEPPKEKPEPETLIKKRKARSLPLSTSLDHRSEELHQDCL VLATAKHSRELNEVDVADVEERFHLGLFTDRATLYRMTIDIEGKG HLENCHPELFHQLMLWKGLKGVLTAAERGETDNLVAMAPAA GYHVWLWAVEAFKQLCFQDQYVKAASHLLSIHKVYEAVELLS NHFYREAIATAKARLPEDPVLDLYLSWGTVLERDGHYAVAAK CYLGATCAYDAKVLAKKGAASLRTAELAIAIVGEDELSASLA LRCAQELLLANNWVGAQEALQLHESLQGRLLVFCLELLSRHLE EKQLSEGKSSSSYHTWNTGTGEPFVERVTAVWKSIFSLDTPPEQY QEAFFQKLQNIKYP SATNNTPAKQLL LHI CHDLTLAVLSQQMASW |

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|------------|--|--|--|
| | | | DEAVQALLRAVRSYDSGSFTIMQEVSAFLPDGCDHLRDLKGD HQSPATPAFKSLEAFFLYGRLYEFWWSLSRCPNNSVWVRAGHR TLSVEPSSQLDASTTEBDPETSQPEPNRPSLEDLRLTEEGERM LSTFKELFSEKHASLQNSQRTVAEVQETLAEMIRQHQSQKCS TANGPDKNEPEVEAEQPLCSSSQCKEENEPLSLPELTKRRLTE ANQRMAKFPESIKAWFPDVLCCCLVLLLIRSHFPGLAQEMQQ QAQELLQKYGNTKTYRRHCQTFCM |
| 5838 | 110 | 98 | KTMFHLIVTFRDVAIDFSQEEWECCLDPAQRDLYRDVMLENYSNL ISLDLESSCVTKKLSPEKEIYEMES\PSGRIWGNVSTITFYQNG LGDNMECKGNLEGGQVSSEGLYMCVKITCEEKATESHSTSTTFH RII/HYQGGKIVKCKECCRGFSYLSCLIQHEENHNI*KCEVNNK RNTFSKKPSYI*HQ\KFRLGKEKPYECMECGKAFGRSDLLIQHK IHTNEKPYQCNACGKAFIRGSQLTEHQRVHTGEKPYDCKKCGKA FSYCSQYTLHQRIHSGEKPYECKDCGKAFILGSQTYHQRIHSG EKPYECKEKGKAFILGSHLYHQRVHTGEKPYICKCKGKAFILCA SQLNEHQRIHTGEKPYECKEKGKTFFRGSQLTYHLRVHSGERP YKCKEKGKAFISNLIHQRIHTGEKPYKCKEKGKAFICGKQLS EHQRHTGEKPYECKEKGKAFIRVAYLTQHEKIHGEKHYECKEC GKTFRVATQTYHQRIHTGEKPYKCKEKGKAF/HLWLTILSEHQ RIHRGEKPYECKQCGR/LFIRGSHL/NEHLRHTGEKPYECKEC GRAFSRGSEHTLHQRIHTGEKPYTCVQCGKDFRCPSQLTQHTRL HN*EYSSHKIKMHSIALASLDFAHLQEKNPEN |
| 5839 | 1 | 2425 | GREFFRPRPALRPLRLGRRRQDGRWTVDFEECLKD\SPRFRAAL BEVEGDVAELEKL\DKLVKLCIA\MIDTGKAFVCANKQFMNGI RD\LAQNS\NND\VVETKFAPSLDQLQEMINFHTIL/L*PNS EIN*GHSFQNFVKEDLRKFKDAKKQFENSQ*KRKKIALVKNAPV PSRPASLEL*KPNILATRKCFRHIADYVLQINVLQSKRRSE ILKSMLSFMYAHLAFFHQGYDLFSELGPYMKDLGAQLDRLVGD AAKEKREMEQKHSTIQCKDFSRDDSKLYNVDAANGIVMEGYLFX RASNAFTWNRWFISIQNNQVYQKKFKDNPTVVVEDLRLCTVK HCEDIERRFCFEVVSPTKSCMLQADSEKLRQAWIKAVQTSI\AT AYREKDDSEKLDKXSSPSTGSLDSGNESKEKLLKGESALQVRQ CIPGNASCCDCGLADPRWASINLGITLCIECSGIHRSGLGVHFSK VRSLTLDTWEPBELLKLMCELNDVINRVYEANVEKMGIKKPPQG QRQEKEAYIRAKYVERKFVDKIFL*SLSPPEQQKK\FVSKSE EKRLSISKFGP\GDQVRASQSSVRSNDSGIQSSDDGRBSLPS TVSANSLEYEPGERQDSSMFLDSKHLNPGQLYRASYEKNLPKM AEALAHGADVNWANSEENKATPLIQAVLGGSILVTCFLLQNGAN VNQRDVQGRGPLHHTATVLGHTGQVCLFLKRGANQHATDEBKDP LSTAVEANADIVTILRLARMNEEMRESEGLYGQPGDETYQDIF RDFSQMASNNPEKLNRPQDQSQKF |
| 5840 | 698 | 3610 | KHLHLPRQHLTTLWQISSPRWRSQRAFMSALSKTQTQSPALQ GLSSLLQSVTGNPVPASEAASQSTSASPANTTVYTIKGRNLPSS AQPFIPKSFNYSPPNSSTSEVSTSSASKASIGQSPGLPSTAFKLP SNTKGFTATHNTSPAAPPTEVTICQSSEVSKPKL\ESESTSPSL \EMKIHNFLLKGNPGFSVA*NLKHPNPAGSLGSSAPSESHESDFQ RGPTSTSIDNIDGTPVRDERSGTFTQDEMMDKPTSSSDVTMSLL SKIISPGSSSTESSTRSPPPGRDESYPRELSNSVSTYRPFGLGSE SPYKQPSDGMERPSSLMDSSEKQFYPDTSFQEDEDYRDFEYSGP PPSAMNLOKKPAKSLKSSKLSDTTEYQPIILSSYSHRAQFVG KSAFPSPVRALLDSENCDRLSSSPGLFGAFSVRGNEPGRSDRSP SPSKNDSTFTDSNHNLSQSTTGHLSLPQKQYDPSPHVPHRS LFPSPQNTLAAPTGHPTSGVEKVLASTISTTSTIEFKNMLKNAS RKPSDDKHFGQAPSKGTSPDGVSLNLTQPSLTATDQQQEEHY RIETRVSSSCLDLPDSTEBKGAPIETLGYHSASNRMSGEPIQT VESIRVPGKGNRGGHGREASRVGWFDLSTSGSSFDNGPSSASELA SLGGGGSGGLTGFKTAPYKERAPQFQESVGSFRSNSFNSTFEHH LPPSPLEHGTFFQREPVGPSSAPPVPPKDHGGIFSRDAPTHLPS VDLSPNFTKEAALAHAAAPPPPEHSGIPFTPPPPPPPEHSS SGGSGVPFSTPPPPPPVDHSGVVPFAPPLAEHGVAGAVAVFP KDHSSLLQGTLAEHFGLVLPGRDHGGPTQRDLNGPGLSRVRESL |

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|------------|--|--|--|
| | | | TLPSHSLEHLGPPHGGGGGSSNSSGGPPLGPSHRDTISRSGIT LRSRPDPFRPREPFLSRDPFHS LKRPFPFARGPPFFAPKRPFF PPRY |
| 5841 | 1908 | 762 | GLRLFLVLTVWPMMPKPSWLSRTEFSKRLLCRTLWCQSGWSSRSY TRSMLKMTT'S INRRSRTSTKSTRTSARPGLTATVSGLSDSPTW RHCWMTARSCSGEKGHHWAPRQVGVYLLPGRVGCVSSRVSPSFP GDGLDSGLARRGSAVSALASGLVEPMLGPPFHPTPRFKAVSAK SKEDLVSQGFTEFTIEDFHNTFMDLIEQVEKQTSVADLLASFND QSTSDYLVVYLRLLTSGYLQRESKFFEHFIEGGRTVKEFCQ\QE \VEPMCKESDHIHIIALAQGLQRVHPGWBYMGPRPRAATTNPHI FP*GLPSPKVYLLYRPG\HYDILYKIGLGSSPLGCGPCPLLARA LGHCYRGFSVVVKWSYFTPFLLSHDPPPMFY |
| 5842 | 307 | 1918 | QEPTADFKLRSTCGGREMTCPDKPGQLINWFICSLCVPRVRKL WSSRRPRTTRNLLGLTACATYLGFLVSQVGRASLQHGQAAEKGP HRSRDTAEPSPFPEIPLDGTLAPPESQNGSTLQPNVVYITLRSK RSKPANIRGTVPKPKRRKKHAVAASAAPQEAALVGPSPQCPQEA\EG KLML*HLGTLREQTWLRLES DPGGWCGVRE/WRAGGFDFLQPS RESNIRIYSESAPSWLSKDDIRRMRLADSAVAGLRPVSSRSGA RLLVLEGGAPGAVLRGCPSPCGLLKQPLDMSEVF AFHLDRILGL NRTLPSVSRKAEEFIQDGRPCPIILWDASLSSASNDTHSSVKLTW GTYQQLLKQKCWQNGRVKPKESGCTEIHHEWSKMALDFLLQI YNRDLTNCCGFRPRKEDACVQNGLRPKCDDQGSAAALHI IQRKH DPRHLVFDNKGFFDRSEDNLNFKLLEGIKEFPASAVYVLKSKH LRQKLLQSLFLDKGYWESQGGRGQIEKLIDVIEHRAKILITYIN AHGVKVLPMNE |
| 5843 | 500 | 1453 | GTARLVTCWVLHGQ*VKKPAWEPGVVWL*Q*RCRPGWGLGAGM RGSRRSQPPQCLRRRAQSSCCHFMVKLLDDGTFTMIPGEKVAHTSL DALVTFHQKPIEPRELLTQPCRQKDPANVDYEDLFLYSNAVA EEAACPVSAPBEASPKPVLCHQSKERKPSAEM/RQNNHQGSHFL LPFKIPSWRDPPEETLEEPQNAERERPEGPAAAKKPPRHCLVVT LGCPETIHGDLRPWDRKQPRSLRGSHLGGQRLHGS LCGHISQKP LTAPGTRKQKPGHQEGREVGLH*GDPRGQELAPNGSESPILPG VQARAPGLGRA |
| 5844 | 202 | 2471 | FDSAVLSSINVMAYLPGPLQLLGVLLTISLSSIRLIQAGAYYGI KPLPPQIPPPQMPQIPQYQPLGQQVPHMPLAKDGLAMGKEMPHL QYGKEYPHLPQYMKETQAPAPRMGKEAVPKKKEIPLASLRGEQG PRGEPGRGPPGPPGLPGHIGPIKKGKPGQGPVGVKPGMPGM PGKPGAMGMPGAKGEIGQKGEIGPMGIP*PQGGPPHGLPGIGK PGGPGLPGQPGPKGDRGPKGLPGPQCLRGPKDKGFGMPGAPGV KGPPGMHGPPGFPVGLPGVKGPGVTGFPGP\QGPLGK\PGAPGEP GPQSGIPGVPGVQGGPPGIPGIGKPGQDG\IPGQPGFPGGKGEQGL PGLPGPPGLPGIGKPGFPKPGDRGMGGVPGALGPRGEKGPIGA PGIGGPPGEPGLPGIPGPMGPPGAIGFPKPGEGGIVGPGGPPG PKGEPGLQGFPGKPGFLGEVPPGMRGFPPIGPKGEHQKGVPL GLPGVPLGLPGKGEPIPGDQGLQGGPIGIGGFSGPIGPPGI PGPKGEPLPGPPGFPGIGKPGVAGLHGPPGKPGALGPGQPGI PGPPGPPGPPGPPAVM?PTPPPQGEYLPDMGLGIDGVKPPHAYG AKKGNKGGPAYEMPAFTAELTAPFPVGPVVKFNKLLYNGRQNY NPQTGIFTCEVPGVYFYFAYHVHCKGGNVWVAFKNNPVMYTYD EYKKGFLDQAGSSAVLLLRPGDRVFLQMPSEQAAGLYAGQYVES SFGSYLLYPM |
| 5845 | 215 | 2061 | HASNKASLQDKMANPKERTAMCLVNELARFNRVQPPQYKLLNER CPAHSMFVSQLSLGEQTWESESSIKKAQQAVGNKALTESTLP KPI*KPPKSNVNNNPGCITPTVELNGLAMKRG\KPAIHRPLDFK PFPNNRANYNFQVMYNQRYHCPIPKIFYVQLTVGNNEFFGEGKT RQAARHNAAMKALQALONEPIPERSPONGESGKMDMDKDKANKS EISLVFEIALKRNMPVSEFVIEKESGPPHMKSFVTRVSVGEFSAE GEGNSKKLSKKRAAT'TVLQELKKLPPLPVVEKPK\HFFKRPKT IVKAGPEYGGMNPISRLAQIQAKKEKEDYVLLSERGMPPRR EFVMQVKVGNVATGTGPNKKIAKNAAEAMLLQLGYKASTNIQ DQLEKTGENKGWSPKPGFPEPTNNTPKGIHLHSPDVYQEMEAS |

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|------------|--|--|---|
| | | | RHKVISGTTLGYSFKDMNQPPSSFFSISPTSNSSATIARELLM NGTSSTAEAGLGSSPTPPCSPVQPSKQLEYLARIQGFQVHYC DROSGKECVTCLTLAPVQMTFFHAGSSIEASHDQV*YATAILLC YG?ARKWKAIKMEAMCAHAALLSLIHLLAPSAARLEKSKLPAIG N. |
| 5846 | 1126 | 456 | FSKLIMKTFIIGISGVNTSGKTTLAKNLQKHLNCSVISQDDFF KPESIEITDKNGFLQYDVLALNMEKMSAISCWMSARHSVVS TDQESAAEIPILIEGFLFNYPKPLDTIWNRSYFLTIPYECKR RRSTRVYQPPDSEGYFDGHVWPMYLYKVRQEMQDITWEVVYLDGT KSEEDLFLQVYEDLIQELAKQKCLQVTA*RRNTTNPS/CK*IRK LQGV |
| 5847 | 2769 | 505 | APEMEDLSSPDSTLLQGGHNLSSASFQESVTFKDVIVDTQEE WKQLDPGQRDLFQDVTLENYTHLVSIGLQVSKPDVISQLEQTE PWIMEPSIPVGTCADWETRLSNSVSAPEPDISEEELSPEVIVEK HKRDDSWSNNLLESWEYEGSLERQQANQOTLPKEIKVTEKTIPS WEKGPVNNEFGKSVNVSSNLVTQEPSPEETSTKRSIKQNSNPVK KEKSCCKNECGKAFSYCSALIRHQRTHTGKPYKCN*/C/EKAF SRSENLIHQRIHTGDKPYKCDQCGKGFIEGSPSLTQHQRHTG KPYKDECGKAFSQRTHLVQHQRHTGKPYTCNECGKAFSQRG HFMBHQKIHTGKPFKDECDKTFTRSTHLTQHQRHTGKPYK CNECGKAFNGPSTFIRHMIHTGKPYECNECGKAFSQHNSLTQ HQRTHTGKPYDCACGKSFYSWSSLAQHLKIHTGKPYKNEC GKAFSYCSSLTQHRRHTREKPFECSECGKAFSYLSNLNQHQKT HTQEKAYECKECKGAFIRSSSLAKHERHTGKPYQCHECGKTF SYGSSLIQHRKIHTGERPYKNECGRAFNOIHLTQHQRHTGTA KPYECAECGKAFRHCSSLAQHQRHTGKPYQCNKCEKTFQSS HLTQHQRHTGKPYKNECDKAFSRSTHLTQHQRHTGKPYK CNECGK\TFSQSTYLIQHQRHSGEKPPGCNDCGKSFYRSALN KHQRLHPCI |
| 5848 | 22 | 2961 | AAFRRLLRGGDGRTPRFPPLALLRPGPPAABAPERRKMPAVSK GDGMRGLAVFISDIRNCKSKAEIKRINKELANIRSKFKGDAL DGYSKKKYVCKLLFIFLLGHDIDFGHMEAVNLLSNRYTEKQIG YLFISVLVNSNSELIRLINNAIKNDLASRNPFTMGLALHCIAV GSREMAEAFAGEIPKVLVAGDTMDSVKQSAALCLRLRYTSPLD VPMGDWTSRVVHLLNDQHLGVVTAATSLITLAQKNPBEFKTSV SLAVSRSL\RVTSASTDLQDYTY*FCPGFLGLSVKLLRLQCY PPPDPAVRGRLTECLETILNKAQEPKSKKVQHSNAKNAVLFEA ISLIHHDSFNLLVRACNQLGQFLQHRETNLRYLALESMTLA SSEFSHEAVKTHIETVINALKTERDVSVRQRAVDLLYAMCDRSN APQIVAEMLSYLETADYSIREETVLKVAI LAEKYAVDYTW\YVD TILNLIRIAGDYVSEBVWYRVIQIVINRDDVQGYAAKTVFEALQ APACHENLVKVGYYILGEFGNLIAGDPRSSPLIQPHLLHSKFHL CSVPTRALLLSTYIKFVNLPPEVKPTIQDVLRSQSRLRNADVEL QQRAVEYLRLSTVASTDILATVLEEMPPFPERESSILAKLKKK GPSTVTDLEDTKRDRSVDVNGGPEPAPASTSAVSTPSPADLLG LGAAPAPAGPPPSGGSGLLVDVPSDSASVAPLAPGSEDNFA RFVCKNNGVLFENQLLQIGLKSEFRQNLGRMFIYGNKTSTQPL NFTPPTLICSDDLQPNLNLQTKPVDPTVEGGAQVQVNIQVSD FTEAPVLNIQFRYGGTFQNVSVQLPITLKNFFOPTEMASQDFFQ RWKQLSNPQQEVQNIKAKHPMDTEVTAKIIGFGSALLEZVDP NPANFVGAGIHTKTQIGCLLRLEPNLQAQMYRLTTRTSREAV SQRCELLSAQF |
| 5849 | 3545 | 1695 | KRRETKETVFHHVAQAGLELLSSSNPPSSASRSAGITGMRHQVQ P*DPCMSLSPPCFTEEDRFSLEALQTIHKQMDDDKGGIEVEES DEFIREDMKYKDATNKHSHLHREDKHTIEDLWKRWKTSEVHNW TLEDTLQWLIEFVELPQYEKNFRDNNVKGTTLPRIAVHEPSFMI SQLKISDRSHRQKLQKALDVVLFGLPTRPPHNWMDFILTVSI VICVGGCWFAYTQNKTSKEHVAKMMKDLESQTAEQSLMDLQER LEKAQENRNVAVEKQNL*RKMMDEINVAKEACRLRELRGAE CELSRQYABEQELEQVRMALKKAEKEFLRSSWSVPDALQKWLQ LTHEVEVQYNNIKRQNAEMQLAIAKDEAEKIKKKRSTVFGTLHV |

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|------------|--|--|---|
| | | | AHSSSLDEVDHKLLEAKKALSELTTCLRERLFRWQQIEKICGFQ IAHNSGLPSLTSSLYSDHSWVMPRVSIIPPYPIAGGVDDLDDEDT PPIVSGPPGTMAKPPGSLARSSSLCRSRRSIVPSSPQPQRAQLA PHAPHPSPRHPHPQHTPHSLPSPDPDILSVSSCPALYRNREEE EEAIYFSABKQWEVPDTASECDLSNLSIGRKQSPF/SKPRDIPN IIS/DERYQEMRCP*RIPSGGIL |
| 5850 | 3 | 1895 | KAVLNFSASGSVISLTGSNPMHDASMWHLKKNGITIVYLDVPLLN LICRLKLMKTDRTVQNSGTSMKDLLKFRQQYKKWYDARVPE SGASPEEVADKVLNAIKRYQDVSETFISTRHVWPEDECEQKVS EFFTEAVIEGLASDGGFLVPAKEFPKLSCGEWKS LVGATYVERA QILLERCIHPADIPAARLGEMITAYGENFACSKIAPIVRHLSGN QFLELPHGPTGSFKDLSLQLMPHIFAQCIPPCNYMILVATSG DTGSAVLNGFSRLNKNKQRIAVVAFPEENGVSDFQKAIIGSQ RENGWAVGVESDFDCCQTAIKRIFNDSDFGTFLTVEYGTILSSA NSINWGRLLPQVYHASAYLDLVSQGFISFGSPVDVCIPNENFG NILAAVYAKMMGIPIRKFCASNQNHVWTDFTIKTG\HYDLRGKE N*AQTFFFTVQ*IFLENLSNLERHLHLMANKDQQLMTELFNRLS QHHPQIEKALVEKLQDFVADWCSEGECLAINSTYNTSGYILD PHTAVAKVVADRVQDKTCPVIISSTAHYSKFAPAIMQALKIKEI NETSSSQLYLLGSYNALPPLHEALLERTKQKEKMEYQVCAADMN VLKSHVEQLVQNFQFI |
| 5851 | 3120 | 1802 | RCYLQFLALLLTSTSAARAAAATAAAEFPAGSPFSVMTRAGDHNRO RGCCGSLADYLTSAKFLLYLGHSLSTWGDMMHFAVSVFLVELY GNSLLLTAVYGLVVGSVLVGAIIGDWVDKNARLKVAQTSLVV QNVSVILCGIILMMVFLHKKHELLTMYHGWLTSCYILIIITIANI ANLASTATAITIQRDWIVVAGEDRSKLANMNATIRRIDQLTNI LAPMAVGQIMTFGSPVIGCGFISGWNLSMCEYVLLWKVYQKT PALAVKAGLKEEETELKQLNLHKDTEPKPLEGTHLMGVKDSNIH ELBHEQEPTCASQMAEPFRTFRDGVWSYINQPVF/LGWGSCFP LYDCPGL*LHHHRVRLHSGTEWFFHPQYFDGSIYNWNNGNCSFY LATSKMWFSGSDRDLRIGTAFLFDLVCDLCIHAWKPPGLVRFSEF |
| 5852 | 1 | 422 | KTTFFPSLCPLRQLPEVRGYSQPLTDPLISLCRSHKCRGKGGW SSSYPSLPALLRARSAPGHCTHRSCGPEWRIDISRLMEMQARR SGWAQAQPTIILLVPLRLKSLPSIWG/SLMGFFITSGPG/WFRQ YYFFISGRH*VLFTESDFYVAMDFGGHGLSSHYSFGVPPYLLQT FVSEIRRVVAGKKQSVYFRRCGGCSRAPPLITGGGVGSRKQRP ESCAWALAPGLPAIHGRSWES |
| 5853 | 223 | 1346 | RLGLSLRVKGLHGPAASAWISDPETRGDPGGPWGMWRGSDLRDR PVS LTGLTLVCK*AAQGPQV\HSVKLCFGLGG\PCLL\FPIFRP LLLHPRRPRLHPGTRGVAVEPHALRVVHVHAGGEEAGIRAGPGH GGVEIPQG/VGSLGARRGLRPSRPSRHRNRVPAPPPGRFLATP HRRRFPDPALTCPGLGQDQGPREQQKQSGRHDITLGDWGESE SRWVRGNFRTGTAAATLIGFSRNPTLNGSENWGLSVSIQEEGPD GWEREKRNPAEMGNPQRWASPHTPPLGPEILRAMPEALRAMPE ALGLRPDPATSVPSALS/CTF/PESWPRSLRNQGETLGMGPVP LSSLCITESPQNWTPLCLLLTLCRGLF |
| 5854 | 86 | 938 | KGRNTAPEKKGAALNNRENASS*NGY/SRWKQDIRRIENHIIQE LXHLCLAMIKRVLLERLENTKRLRELTEGRTLDWPQNRITVSAK RQIVTBYREKGRN*BEKKRDLEGRSRRYNLCIIGIPETEDRAS GAETIKDLE/ENFPKLKELDLQMEKAHRIPLKFNKKAASRH TRVTF/LKQRRNIIQASSQRKQVYKGAKVRLTSDFSAILNA RROW/N/PISRVLRENNFEPRIIYSAKLSFLYKGNWKTFLDIQ LGKIYNQELSLKILLKDLLQLTENLN |
| 5855 | 536 | 2391 | LRSYGCKAPSRISHLHK\FLELLLSLLMGYSESEFPITDSWAP FISLTHHVLSSQSPLSSNCWICLSTHTQ*FTALPADLLTWTQS NVSLHISYLAIPFLADSFLLKP/L*PGNSAKHLSFKLSSLSMVS GRAVALLHLIASGLTSIQTNTASSKPIWGY\LSTQTSFISPPP LCLSRTPNPAHATMVGVQVPSLCLLIFTL/RTPCRPSILHPNY KIISTSAWQKVLCSGSPITHTSLHITGSSFLSEHPIPGFPAA NSALYVSSSLKGGPPGKNVTIPSPVGT*QPPHRGSN/RLTVDKDN |

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|------------|--|--|---|
| | | | FFLSPKPNSLHQLPSQ\TPYQALTGAALAGSYPIWENENTLSWL PTFTYNFCLSTPSEFFLCDTN*YLCLPANWSGTCTLVFQAPTIN ILPPNQITILISVEASISSSPIRNKWLHLITLLTGLGITAALGT GIAGITTSITSYQTLFTTSLNTVEDMHTSITSLQRQLDFLVGVI LQNRVLDLLTTEKGGTCIYLQEECCFCVNESGIVHIAVRRRLHD RAAEL*HQVADSWWQGSLLRWIPWVAPFLGLIFLFLLLMIGP CIFNLVSRFISQRLNCFIQASMQKHIDNIFHLCHV*YQSLRGNH SEAPEPRP |
| 5856 | 173 | 1137 | PWLHGLGLSAVFLFYL*/YVTFHLYGGIILLLLIFISIAIGILYK FQDVLLYFPEQPSRSSRLVPMPTGIPHENIFIRTKDGIRLNLIL IRYTGDNPSYSPITIIYFHGNAGNIGHRLPNALLMLVNLKVNLLL VDYRGYKSEGEASEEGLYLDSAVLDYVMTSPDLDKTKIYLSG RSLG\GAAAIHLASDNSHRISAIMVENTFLSIPHMASTLFSFPP MRYLPLWCYKKNFLSYRKISQCRMPSLFISGLSDQLIPVVMKQ LYELSPSRTKRLAIFPDGTHNDTWQCQGYFTALEQFIKEVVKSH SPEEMAKTSSNVITII |
| 5857 | 1597 | 563 | KLIGKVLVLSVADAMAAFAVEPQGPALGSEPMMLGSPTSPPKPG VNAQFLPGFLMGDLFAPVTPQPRSISGFSVGVMMRSPLLAGGS PPQPVVPAHKDKSGAPPVRSIYDDISSPGLGSTPLTSRRQPNIS VMQSPLVGVTSTPGTGQSMFSPASIGOPRKTTLSPAQLDPFYTQ GDSLTSEDH\LDDSWGDCIWGFLKASA\SYILL\QFAQYGGIS* NMWMSNTGNWMMHIRYQSKLOARKALSKDGRIFGESIMIGVKPCI DKSVMSSDRCALSSPSLAFTPIKTLGTPTQPGSTERISTMRP LATAYKASTSDYQVISDRQTPKKDESLSVKAMEYMEGW |
| 5858 | 355 | 1419 | PPHQPAAASTXHQQQQPPPPQDSSKPVVAQGGPGAPGVGSAP PASSSAPPATPTPTSGAPPGSGPGPTPTPPPAVTSAPPGAPPTP PSSGVPPTTPPQAGGPPPPAAVPGPGPKQGGPGGPKGKGMK GGPKPGGGPGLSTPGGHPKPPHRCGGEPGRGRQHHPYHQHHQ GPPPGGPGGRSEKISGPRRGFKANLSLLRRPGEKTYTQRCRFC LLGIYLLISRRMNSRRLFAKIWENQEKFLSTKAKDSEFIKLES ALA*NCPKPELG*YTP*GGRQLPSSLFPTHACLPLSCSVIFSPF MFPQ*NCWGRKPFPRPNLGPLKGAVCNRWDDFWEGPTGKGHCLN FAS |
| 5859 | 307 | 1503 | GGSSARPRASSRRLSRKKTKEVSKPAEVQGGKYVKKETSPLLR NLMPSFIRHGPTIPRRTDCLPDSSPNAFTSGDGVVSRNQSF RTEIQRTPEIMRRESNRLSAPSYLARSLADVPREYSSQSFTV EVSFAVENGDGSGRYYSNDFDGGQRKRLPGDRAHEDYRYEYN HDLFORMPONQGRHASGIGRVAATSLGNLTNHGSEDLPLPPGWS VDWTMRGRKYYIDHNTNTTHWSHPLEREGLEPPGWERVESSEFGT YYVDHTNKKAY\RHPCAFTCTSV*STTSCHI/AS/RQQTERNQ SLLVPANPYHTAEIPDWLQVYARAPVKYDHILKWELFQLADLDT YQGMKLKLLFMKELEQIVKMYEAYRQALLTELENRKQRQWYAOQ HGKNF |
| 5860 | 2956 | 1270 | TIRVEBFPLCPGGGKAQLSSASLLGAGLLLOPPTPPPLLLLP LLLFSLRCGALAGPIIVEPHVTAUVGKNVSLKCLIEVNETITQI SWEKIHGKSSQTVAVHHHPQYGFVSQGEYQGRVLFKNYSNLDATI TLHNIGFSDSGKYICKAVTFPLGNAQSSTTVTVLVEPTVSLIKG PDSLIDGGNETVAAICIAATGKPVAHIDWEGDLGEMESTTTSFP NETATIIISQYKLFPTRFARGRRITCVVHKPALEKDIRYSFILDI QYAPEVSVTGYDGNWFVGRKGVNLKCNADANPPFKSVSRLDG QWPDGLLASDNTLHFVHPLTFNYSGVYICKVT\NSPGSKEVTQK VHPTFQDPSLPTYPPLPALQFQWASPSTA*TSRD\LATEP*KIA PSPLSTL\ATIKGWTQLPTIIA*CSGVGALFIV\LVKCFGLGIF CYRRRTFRGDYFAKNYIPPSDMQKESQIDVLQQDELDYPDSV KKENKNFVNLIIRKDYLEEPEKTQWNNVENLNRFERPMDYYEDL KMGMKFVSDHYDENEDDLVSHVDGSGVISRRENYV |
| 5861 | 2051 | 1305 | EVCACVQAFWLVAASSGDDSQGGDKCGCEVGSWVGSMRVMMARLL SEGEQGIPTACAAFAQQPAG/EPRRGLAGVGEPPQCSWVNYKC TLEFLVSLLGTDLARGRGNSASGPTAPADSKQL/ML*DVHRRVI LE*RMNSGS PARDNAPSQRFCNTLSEGLRFGISPSWREALYGC |

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|------------|--|--|--|
| 5862 | 1556 | 483 | <p>A</p> <p>PPFQLIMGEIKVSPDYNWFRGTVP LKKIIVDDDDSKIWSLYDAG PRSIRCLPIFLPPVSGTADVFFRQILALITGWGYRVIALQYPVYW DHLEFCDFGRKLLDHLQLDKVLHFGASLGGFLAQKFAEYTHKSP RVHSLILCNSFSDTIFNQWTANSFWLMPAFMLKKIVLGNFSS GPVDPMMADAIDFMVDRLESQGSELASRLTLNCQNSYVEPHKI RDIPVTIMDVFDQSALSTEAKBEMKLYPNARRAHLKTGGNFPY LCRSAEVLNLYVQIHL/R/RNSMEPNTRPLTHQWSVPRSLRCRKA ALASARRSSSVSLAVNDELTRCVLV*SVASAPVSRFPSPGSSGS PVLTVSGK</p> |
| 5863 | 2714 | 249 | <p>PPFSRGSPLAAPREDTMGPLMVLFCLLFLYPLGLADSAPSCPQN VNISGGTFILSHGWAPGSLTYSCPQGLYSPASRLCKSSGQWQ TPGATRSLSKAVCKPVRCPAPVSFENGITYPRLGSPVGGNVSF ECBDGFI\LRGSPVRQCRPNMGWDGETAVCDNAGHCNPGISL GP\VRTGFRFGHDKVRYRCSNLVLTGSSERECQNGVWSGTE PICRQPYSDYFPEDVAPALGTSFSHMLGATNPTQKTESLGRKI QIQRSGLHNLNLYLLDCSQSVSENDFLIFKESASLMVDRIFSFEI NVSVAITTFASEPKVLSVLDNSRDMTEVISSLENANYKDHEN GTGTNTYAALNSVYLMNNQMRLLGMETMAW\QEIRHAILL\T DGK\SHMGGSPKTAVDHIREILNINQKRDYLDIYAIGVGKLDV DWRELNELGSKKDGGERHAFILQDTHALHVFHMLDVSKLTDTI CGVGNMSANASDQERTPHVHTIKPKSQET\C\RGALISDQWVLT AAHCFRDGNDHSLRNVNVDGPKSQWGKEFLIEKAVISPGFDVFA KKKQGI\EFYGD\DIALL\KLAQKVKM\STHCQGPSCLP\CTM \BANLGFRLRETFRKGSTCR\DHENEL\VNKQSV\PAHF\VAL\N GSKLEHLTLRMGVEWTSCCRGLSPKKKTM\FENLT\DVRE\VVT D\QFL\CS\GPQEDSF\CK*E\SGGA\VFLERRFRLSAGGVWC SWGL\YNP\CLGSA\DKNSPKKGPSVAKVPPPTR\DPHIN\LFP Q*SPWLRQHPGMS*IFLPLLANGHLSPFACPARICRPLEFLPS EWATLRL</p> |
| 5864 | 173 | 1013 | <p>PLISVPQSLISLPQPLLCFFGGQEPSAPSCLYSLFWACSFTMG KLEPSIIPSSSLACVLKLNKPLQLTPDLKPKCLIFFCNTAWPQY KLDNDSK*PENGTFEFSILOVLDNSCHKMGKWEVDPVQAFF\S HWSLPLSCSQC/GLIPNLSSFSFCSFG/PPPQVSP/TSFSS MDSSDLPPSPQAAPRQAEPGNHSLASAPPPYNPFTSPHTWS SLQFHSVTSPPPPAQQFTLKKVAGAKGIVKVSAPFSLSQIR*RL GSFSSNIKIQSSSWLIWQQP</p> |
| 5865 | 568 | 1684 | <p>CLPGPRWGEGRAGHTIVGCIFFKTAIISHFKGMYLCVCMCTC LSVCVCVQVGSWICV/CVSMCACVSLCTC\ICRCISMYTREHAC ACTRV*VYMCMS/VCTCVSTCIDVRVCAHVCVYNCLCLGYA*AC TCV*MCVCMHEHVCMC/VCACSCVLL/CRGHICM/MCMSAYICI /CVYVCLCVWACMRMSTCVWLVIY*ACTCVWMHM/CSCTCR/C VHVCCMSMHACECLCVYLHICGAGTRRWAGSARGSRSCSRLP CWAPGGLSLPGSPCSVEQGLGGGPGQLQGRSGEARLGEHRGW GSPAAVCSRNCVSPRRGADCFEAPDVVPKPPGWGRASFEERG GGRGWVCAPPLNGPQCCCFSIKPELAKKKK</p> |
| 5866 | 98 | 3197 | <p>ARPEVPAPPAWLSRRGAAMGDKDDKDSPKKNKGKERRDLDDL KKEVAMTEHKMSVEEVCRYNTDCVQGLTHSKAQILARDGPNAL LTPPPPTPEWVKFCRQLFGGFSILLWIGAILCFLAYGIQAGTED DPSGDNLV\GIVLAAVVIITGCFSYQEAKSSKIMESFKNMVPO QALVIREGEKMQVNAEEVVVDLVEIKGGDRVPADLRIISAHGC KVDNSSLTGESEPQTRSPDCTHE\NPLKTRNITFFSNNFVEGTA RGVVVATGDRVTMGRIATLASGLEVGKTPIAIBIEHFIQLITGV AVFLGVSFFILSLILGYTWLEAVIFLIGITIVANVPEGLLATVTV CLTLTAKRMARKNCLVKNLEAVETLGSTSTICSDKTGTLTQNRM TVAHMWFNDQIHEADTTEQSGTSFDKSSHTWVALF*H/LLGFC NRPVFKGGQDNIPVLKRDVAGDASESALLKCI BSSSGSVKLMRE RNKKVAEIPFNSTNKYQLSIHETEDPNDNRYLLVMKGAPERILD RCSTILLQGGKQPLDEEMKEAFQNAYLELGGGLGERVLGFCHYYL PEEQFFKGFAPDCDDVNFTTDNLCFVGLMSMIGFPRAAVPDAVG KCRSAGIKVIMVTGDHPITAKAIAGVGIIIFEGNETVEDIAARL</p> |

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|------------|--|--|--|
| | | | NIPVSQVNPDAKACVHGTDLKDFTSQIDEILQNHTEIVPAR TSPQOKLIIIVEGCQRQGAIVAVTGDGVNDSPALKKADIGVAMGI AGSDVSKQAADMILLDDNFASIVTCVVEGRILFDNLKKSIAIYTL TSNIPETITPFLIFIMANIFLPLGTITILCIDLGTDMVPAISLAY EAAESDIMKROPRNPRTDKLVNERLISMAYGQIGMIQALGGFFS YFVILAENGFLPGNLVGI RLNWDDRTVNDLEDSYGGQWYIEQRK VVEFTCHTAFVFSIVVQWADLIICKTRNSVFQGMKNKILIF GLFEETALAAFLSYCPGMDVALRMYPKPSWNEFCAPFYSFLIFV YDEIRKLIILRRNPGGWVEKETYY |
| 5867 | 3 | 1485 | LPGRRRAGRGRLGWPPAQAALDGSRMGKAKVPASKRAPSSPVAKP GPVKTLLTRKKNKKKKRFRWKSAREVSKKPASGPGAVVRP2KAP DFSQNKALQEWLLKQKSQAPEKPLVISQMGSKKKPKI IQQNKK ETSPQVKGEMPAGKDQESRGSVPSGSKMDRRAPVPRTKASGT EHNKKGTKERTNGDIVPERGDI EHKRRKAK\GQPQPHPPR/IDI WFDVDDPADIEAAIGPEAAKIARKQLGQSEGSVSLSLVKEQAFG GLTRALALDCEMVGVGPKGEEESMAARVSI VNYQYKCVYDKYVKP TEPVTDYRTAVSGIRPENLKCQGEELVVQKEVAEMLKGRILVGH ALHNDLKVFLDHPKKKIRDTQYKPKFSQVKSGRPSLRLLSEK ILCLQVQQAHEHCISIQDAQAAMRLYVMVKKEWESMARDRRPLTA PDHCSDDA*QSCPAAAAAPLQRQCDQSQGQITSPQSCNSGTFS ESWQRGVANCY |
| 5868 | 2122 | 833 | LTAGASHTQDASQSTSAKYPAQAQNL/CVTNAMREDLADIWYIR AVTVYDKPASFFKETPLDLQHRLFMKLGSMHSPFRARSEPDPV TERSAFTERDAGSGLVTRLRERPALVSSTSWTEDEDFSI LLAA LESRV*T\MTLDGHNLP SLVCVITGKGPLREYYSLIHQKHQFQ IQVCTPWLEAEDYPLLLGSADLGVC LHTSSSGLDLP MKVVDMFG CCLPVCVAVNFKCLHELVKHEENGLVFEDSEELAAQLQMLFSNFP DPAGKLNQFRKNLRESQQLRWDES SVQTVLPLVMDT |
| 5869 | 2122 | 833 | LTAGASHTQDASQSTSAKYPAQAQNL/CVTNAMREDLADIWYIR AVTVYDKPASFFKETPLDLQHRLFMKLGSMHSPFRARSEPDPV TERSAFTERDAGSGLVTRLRERPALVSSTSWTEDEDFSI LLAA LESRV*T\MTLDGHNLP SLVCVITGKGPLREYYSLIHQKHQFQ IQVCTPWLEAEDYPLLLGSADLGVC LHTSSSGLDLP MKVVDMFG CCLPVCVAVNFKCLHELVKHEENGLVFEDSEELAAQLQMLFSNFP DPAGKLNQFRKNLRESQQLRWDES SVQTVLPLVMDT |
| 5870 | 2122 | 833 | LTAGASHTQDASQSTSAKYPAQAQNL/CVTNAMREDLADIWYIR AVTVYDKPASFFKETPLDLQHRLFMKLGSMHSPFRARSEPDPV TERSAFTERDAGSGLVTRLRERPALVSSTSWTEDEDFSI LLAA LESRV*T\MTLDGHNLP SLVCVITGKGPLREYYSLIHQKHQFQ IQVCTPWLEAEDYPLLLGSADLGVC LHTSSSGLDLP MKVVDMFG CCLPVCVAVNFKCLHELVKHEENGLVFEDSEELAAQLQMLFSNFP DPAGKLNQFRKNLRESQQLRWDES SVQTVLPLVMDT |
| 5871 | 3 | 3465 | FFFCRPLRLYSKTTGDRSAMAGAAGLTAEVSWKVLERRARTKRS VLKLL*LSLRRL*LEPTI*NGLLT*CSRLSVFRFLKV\GSVYEP LKSINLPRPDNETLWDKLDHYIRIVKSTLLLYQSPPTTGLFPPTKT CGGDQKAKIQDSLYCAAGAWALALAYRRIDDDKGRTHELEHSAI KCMRGILYCYMRQADKVQKQDPRPTTCLHSVFNVHTGDELLS YEEYGHLOINAVSLYLLYL VEMISSGLQI IYNTDEVSTQNLVVF CV\ERVYRVP\DFG\VWGKREGKYY*/SGSTELHSSSVGLGKRQ L*KQFNGFNLFNGNQCWSVIFVDLDAHNRNRQTLCSLLPRESR SHNTDAALLPCISYPAFALDDEVLPSTLDKVVRLKLGKYGFKR FLRDGYRTSLEDPNRCYYPKAEIKLFDGIERCEFIFFLYMMIDG VFRGNPKQVQEQDQLLTPVLHHTTEGYPVVPKYVVPADFEVEY KNNPGSQKRFPSNCGRDGKLFVWGGALYI IAKLLADELISPDI DPVQRYVPLKDQRNVSMRFSNQGPLENDLVVHVALIAESQRLQV FLNTYGIQTOTPOQVEPIQIWPOQELVKAYLQLGIGINEKLGLSGR PDRPIGCLGTSKIYRILGKTVVCPYIIFDLSDFYMSQDVFLLDI DIKNALQFIKQYWKMHGRPLFLVLIREDNIRGSRFNPILDM LAA LKKGIIGGVKVHVDRLQTLISGAVVEQLDFLRISDTEELPEFKS FEELEPPKHSKVQRQSSTPSAPBLGQQPDVNI SEWKDKPTHEIL QKLNDCSCLASQAILLGILLKREGPNFITKEGTVDSDHIERVYRR |

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|------------|--|--|--|
| | | | AGSQKLWSVVRRAASLLSKVVDLSLAPSTINVLVQGGQVTLGAFG HEEEVISNPLSPRVIQNIYYKCNTHDEREAVIQQELVIHIGWI ISNNPELFSGTLKIRIGWIIHAMEYELQIRGGDKPALDLYQLSP SEVKQLLLDILQPQNGRCWLNRRQIDGSLNRTPTGFYDRVWQI LERTPNGIIVAGKHLPPQPTLSDMTMYEMNFSLLVEDTLGNIDQ PQYRQIVVELLMVSVIVLERNPELEFQDKVDLDRIVKEAFNEFQ KQSRLEKEIEKQDDMTSFYNTPLGKRGTCSTLTAKVMNLLLEG EVKPNNDPCLIS |
| 5872 | 68 | 665 | VQGYMYRFVIKINSCYSEKTSICRHRCCPELPATQPWPTPTVFF NIAIDSESLGCI\SFKLPADKV\PKRWKNFVLLNTGEKVLGDK GPCFYRIIPG\LCQGGDFTHNGTGKSLYSKEFDDENF\LK TAPGVLSTANAGPTTNGSQFFICTAKTEDG*QHVVFQKVKDGM IVBALERSGSRNGKTSKKITAANCQQL |
| 5873 | 2240 | 506 | RRPEGGSGGRRTRARMPPLWSLALPLLSWVAGGFGNAASAR HHGLLASARQPGVCHYGTKLACCYGWRNRSKGVCEATCEPGCKF GECVGPKNKRCFPGYTGKTCSDVNECGMKPRPCQHRVCNTHGS YKCFCLSGHMLMPDATCVNSRTCAMINCCYSCEDTEEGPQCLCP SSGLRLAPNGRDCLDIDECASGKVICPYNRRCVNTFGSYCKCH IGFELQYISGRYDCIDINECTMDSHTCSHHANCFNTQGSFKCK KQGYKGNLRCSAIPENSVEVLRAPGTIKDRICKLLAHKNSMK KKAKIKNVTBPTRTPTPKVNLQPFNYEETVSRGNSHGG\KKG NEEKMKEGLEDEKREKALKD*HRRERPFPG\DVFFPKVNEAGE FGLIL\VORKALTSKLEHKADLNISVDCSFNHG\ICDW\KQDR\ EDDFDW\NPADR\DNAT\GFY\MAVPGLWQGHK\KDIGRLKLLL PDLQPQSNFCLLEFDYRLAGDKVGLRVFVKNSNNALAWKTTSE DEKWKTKIQIQLYQGTDTAKSIIFEAERGKGTGEIAVDGVLVLS GLCPDLSLLSVDD |
| 5874 | 2 | 3387 | ACPRLARRRRRVRSLRRRRGWLRRARWSRGQNMAARRITQETFD AVLQEKAKRYHMDASGEAVSETLQFKAODLLRAVPRSRABMYDD VHSDGRYSLSGSVAHSRDAGRESLRSDVFGSPFRSSNPSISDD SYFRKECGRDLEFHSNSRDQVIGHRLGHSRQDWKFLRGSW EQDFGHPVQSSESSWSQEYSFGPSAVLGDGFGSSRLIEKECLEKE\ SRDYDVHDHG\EA\DSVLRG\SQVQA\RGRALNIVDQEGSLLG KGETQGLLTAKGGVGLVTLRNVSTKKIPTVNRITPKTQGTNQI QKNTPSPDVTLGTNPGTEDIQFPPIQKIPLGLDLKNLRLPRKMS FDIIDSVDVFSRFGIEIKWAGFHTIKDDIKFSOLFQTLFELET ETCAKMLASFCKSLKPEHRDFCFFTIKFLKHSALKTPRVDNEFL NMLLDKGAVTKNCFEIIKPFDKYIMRLQDRLLKSVTPLLMAC NAYELSVKMKTLNPLDALALETNLSLCKSLALLGQTFSLAS SFRQEKIL*AVGLQDIAPSPAAPPNFEDTLFGREYIDHLKAWL VSSGCPQLQVKAPEPEMREEEKMIPPTKPEIQAKAPSSLSDAVP QRADHRVVGTTDQLVKRVIEGSLSPKERTLLKEDPAYWFLSDEN SLEYKYYKLKLAEMQRMSENLRGADQKPTSADCAVRAMLYSRAV RNLKKKLLP\WQRRGLLRAQG\LRG\WKARRA\TTGTQTLFLR APGLKHHGRQAPGLS\QAKPSLPDRND\AAKD\CPLDPV\GPS QDPSLEASGPSKPGVDISEAPQTSSPCPSADIDMDKNGRTAE KLARFVAQVG\PEIEQF\SI\ENSTDNPDWFL\HDQNSS\APK FY\RKKVFELCPSICTTSSPHNL\HTGGGDTT\GSQESPVDLME GEAEFEDEPPPREAELESPEVMPEDEDEDEDEGGEEAPA\PGRG GPSLEGSTPADGLPGEA\AEDDL\ALGAPALFTGLLQVTCFPPG RGFSKSLKVGMIAPKRVCIQBPKVHEPVRIAYDRPRGRPMS KKKKPKDLDFAQQL\TDK\NLGFO\MLOKMGWKEGHLGSLGK GTR\SRSACTQQAANGGSGWGLSPSTCSLPLGSFTAKMAYSQWL IFVF |
| 5875 | 296 | 1848 | LAALGGLPLWRLSRRGFREYLLGLSAPSALGCMRSVSVYQVRA LEFSGSLFPFHAICLDVDNDTLNELVVGDTSGKVSVMKNDSDRP WLTSCCQGMMLTCVGVGDVCKNKGKLLVAVSAEGWFHLEDLTPAK VLDAAGHHETLIGEEQRPVFKQHIPANTKVMILSDIDGDCREL VVGYTDRVVRAFRWEELGEGPEHLTGQLVSLKKWMLGQVDSL VTLGLPLGLPELMVSQLPGCAYAILCTWKKDTGSPASEGPTDGS /SGDPSCPRRGAAPDIWVPQCECLHSPNWQHT\SHGTESSGS |

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|------------|--|--|---|
| | | | GLFALCTLDGTLKLMEEEMEEADKLLWSVQVDHQLFALEKLDVTG NGHEEVVACAWDQGTYYIIDHNRTVVRFQVDENIRAFCAGLYACK EGRNSPCLVYVTFNQKIYVYWEVQLERMESTNLVKLETKP\ST TACCRSWAWILTTSL*LVPCTKRSTIQTSHSVLPQASRIEPPS WTCLIAEGGFF*TPTLPPKGVFGSHCAAAGSITKQ |
| 5876 | 1122 | 224 | HLPLGVPSKVAGAAAMEPQEERETQVAAWLKKIFGDHPIPYQYEV NPRTTEILHHLSENRNRVRDRDVLVIEDLKQKASEYESEAKYIQ DLLMESVNFSPANLSSSTGSRYNALVDSAVALETKDTSLASFIP AVNDLTSDFRTKSKSEBIKIELEKLEKNLTATLVLEKCLQEDV KKAELHLSTER\AKVDNRRQNM\DFLKAKSEEFRTGQAAGEQL SARGQ\DAFSVP IQSLVALIRENWPRLKQQTIPK\KKLESYLD LMP\NPSHCSK*RIEBAK\RELA\SIEAELTRRS\MMEL |
| 5877 | 2030 | 1907 | GTGKMAASSSGEKEKERLGGGLGVAGGNSTRERLLSALEDLEV LSRELIEMLAISRNOQLLQAGEENQVLELLIHRDGEFQETMKLA LNQGKIHHEMQVLEKEVEKRSDIQQLQKQKAEQILATAVYQ AKEKLSIEKARKGATISSEETIKYAHRIASNAVCAPLTWVPGD PRRPYPPTDLEMRSGLLGQMNNPSTNGVNGHLPGDALA/RRKIAR CPCSTVS/NGSQMTCR*INIILILQKSVCCL |
| 5878 | 950 | 2113 | GLWKCMLQGGPHTHRVQP*PTFRQQGPQ\VPVAVIAGNRPNLY RMLRSLLSAQGVSPQMITVFDGYEPEPMDVVALFGLRGIOHTP ISIKNARVSQHYKASLTATFNLFPEAKFAVLEEDLDIAVDFFS FLSQSIHLEEDDSLYCISAWNDQGYZHTAEDPALLYRVETMPG LGWVLRRLSLYKEELEPKWPTPEKLWDMDMMRMPEQRRGRECI I PDVSRSYHFGIVGLNMNGYFHEAYFKXHKFNTVPGVQLRNVDSL KKEAYEVEVHRLISEAEVLDSKPNPCDSFLPDTEGHTYVAFIR MEKDDDFTTWTQLAKCLHIWDLVRGNHRLWRLPRKKNHFLVV GVPASPYSVKKPFSVTPIFLEPPPKBEGAPGAPEQT |
| 5879 | 3 | 981 | RLTEAAAAGSGSRAAGWAGSPPTLLPLSPTSFRCAATMASSDED GTNGGASEAGEDREAPGKRRRLGFLATAWLTFFDIAMTAGWLVL ATAMVRFYMEKGTTHRGLYKSIQKTLKFFQTALLEIVHCLIGIV PTVSVITGVQVSSRIFMVWLITHSIKPIQNEESVVLFLVAVTIT ETTRYSPYTFSLLDHLPYFIKWARYNFFIILYPVGVAGELLTIY AALPHVKKTGMFSIRLENKYNVSFDYFFLLITMASYTPFPFQQL YFHMLRQRRKVLHG\G*L*KRMK*SLQTRCFFQNNQDYLSPSF NNKNKQLCEISWIVWFLKI |
| 5880 | 1138 | 1324 | SLWCLVAGGLGLGPSSQNPLQAGILARPAREAGTFSALTACSA SVTSKKGSSSGMWPSAASDRDSPVPLRPPGPVQLPSGTGWVLSL D*KKKRGRCSS/WLSQPQHEREKEVLLRRSMAEGERARASDVL CRSLANETHQLRRTLTATAHMCQHAKCLDERQHAQRNVGERSP DQSEHTDGHSTVSQSVIEKLQENRLLKQKVTHVEDLNKQQRYN ASRDEYVRGLHAQLRGLQIPHEPELMRKEISRLNRQLEBKINDC AEVKQBLAASRTARDAALBRVQMLEQQILAYKDDFMSEADRER AQSRIOELEEKVASLLHQVSWRQDSREPDAGRIHAGSKTAKYLA ADALELMVPGGWRPGTGSQQPEPPAEGGHPGAAQRGQDLQCPH CLQCFSDQEGEELLRHVAECCQ |
| 5881 | 26 | 441 | GGIHPSPTAPRAQHLTMDCTWRILFLVAAATGTHAQVQLLQSG SEVKKPGASVMVSCYVSGYTLTKLSMHVWRQAPGKGL*MGPF D LQDVETIYPQKFQGRVSMTEETSTETQ/AYLELSSLRSED TAV HHCATDTV |
| 5882 | 2407 | 2216 | SGCVMELYSHSLEYNPFWISVQSAVAPAQLAINSDGDL*LHSGE RTRRD*QLPEAGGPGLOEPLQLGELDITSEFIDLEVDG\VDLR HYSKQVLELQQTQKSIRDYIQESENIALHNQITACDAVLER MEQMLCAFQSDLSSISSEIRTLQEQSGAMNIRLRNRQAVRGKLG ELVDGLVVPALVTAILEAPVTEPRFLEQLQELDAKAAVREQE ARGTAACADVRGVLDRLRVKAVTKIRBFILQKIYSFRKPMNTNYQ IPQTALLKYRFFYQFLLGNERATAKEIRDEYVETLSKIYLSYR SYLGRMLMKVQYEEVAEKDDLMGVEDTAKKGFFSKPSLRSNTIF TLGTRGSVISPTLEAPILVPHTAQRGEQRYPFALFRSQHYAL LDNSCREYLFICEFFVVGPAHDLFHAVMGRTLSMTLKHLD SY LADCYDAIAVFLCIHIVLRFNRNIAKRDVPALDRYWEQVLALLW |

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|------------|--|--|--|
| | | | PRFELILEMNVQSVRSTDPQRLGGLDTRPHYITRRYAEFSSALV SINQTI PNERTMQLLQQLQVEVENFVLRVAAEFSSRKEQLVFLI NNYDMMLGVLV\ E* ERAADDSKEVESFQQLNARTQBFIEELLS PPFGGLVAFVKEAEALIRGQAERLRGEEARVTQLIRGFGSSWK SSVESLSQDVMRSFTNFRNGTSIIQGALTQLIQ\LYHRFHRV\L SQPQRLALPARAELINIHLMVELKKHKPNF |
| 5883 | 2 | 1374 | EFPGRRFRVMEAGAGAGAGAGWSCPFGPPTVTTLSYEASEG CERKKQWRGSLERRGMQAMEGEVLLPALYEEEEEEEEEEVE EEEEQVQKGGSVGSLSVNKHRLSLTETEEELRAQVLQVLAEL EETRELAGQHEDDSLQLQLEDERLASAQAEVFTKQIQQLQG ELRSLREEIISLLEHEKESELKEIEQELHLAQAEIQSLROAEDS ATEHESDIASLQEDLCRMQNELEDMERIRGDYEMEIASLRAEME MKSSPSGSLGSLSDYSGLEELQELRERYHFLNBEYRALQESNS SLTGQLADLESERTQATERWLQSQTLSTMSAESQTSEMDLEP DPEMQLLRQQLRDAEEQMHGMKNKQCELCCLEBELQHHRQVSEE EQRLRLQELKCAQNEVLRFTSHS\SPSHPLPIPPSSPCLL*A LVVISALLWCWNAETSS |
| 5884 | 4261 | 2522 | GVLARASARLRVPLTGVRACAEPEVGAEPKAVAGAAEPDEDGGR SRLRDCGDYTPSERLGPKGAMLWFGAIPAAIATAKRSGAVFVV FVAGDDEQSTQMAASWEDDKVTEASSNSFVAIKIDTKSEACIQF SQIYPVVCVPSFFIGDSGIPLEVIAGSVSADELVTIRHKVRQM HLLKSETSVANGSQSESSVSTPASFEPMNTCENSQSRNAELCE IPSTSDTKSDTATGGESAGHATSSQEPSCSDQRPADLNIIRVE RLTKKLEBRREEKRKEEQREIKKEIERRKTGKEMLDYKRKQEE ELTKRMLBERNREKAEDRAARERIKQQLALDRAERAARFAKTKE EVEAAKAAALLAKQAEMEVKRESYARERSTVARIQFRLPDGSSF IPSTPSDAPLEEARQFAAQTVGNTYGNFSLATMFPRREFTKEDY KKLLDLELAPSASVLLP/ALFINF*AGRPTASIVHSSSGDIW TLLGTVLVYFPLAIWRLISNFLSNPPPTOTSVRVTSSPPNPAS SSKSEKREPVKRVLBKRGGDDFKKEGKIYRLTQDDGEDENNTW NGNSTQQM |
| 5885 | 900 | 467 | AAGGRRSRLSRSWPTGFSKSPSGVRCCG\RR\AWEDKDEFLDV IYWFRQIIAVVLGVIVGLPLRGFLGIFAGFCLINAGVLYLYFSN YLQIDEEYGGTWELTKGFMTPA/IVHGLDHLHCHPL*LM VYSSQVLP IQSKGPS |
| 5886 | 86 | 1341 | PFRGRALTLLKKQPRPGVAPPSELGTCHKSDPGRPAQSQPPSPGS GTFGLLSFRMVRTKTWTLKKHFVGYPTNSDFELKTSSELPLKNG EVLLEALFLTVDPYMRVAAKRLKEGDTMMGQQVAKVVESKNVAL PKGTIVLASPGWTHSISDGKDLEKLLTEWPDITPLSLALGTVG MPGLTAYFGLLEICGVKGGETVMVNAAGAVGSVVGQIAKLKGC KVVGAVGSDEKVAYLQKLGFVDFVFNKTVESLEETLKKASPDGY DCYFDNVGGEFSNTVIGQMKKFGRIACGAISTYNRTGPLPPGP PPEIGIYQELRMEAFVYVRWQGDARQKALKDILLKWLLELYFVI D*LQANTLVYKSMKSAPKPSLEYISEKLVSG\KIQYKEYIEGFE NMPAAMGMMLKGDNLGKTIVKA |
| 5887 | 1937 | 104 | APGCRGCRATRCPCRGPWRDLSLGDAAARSAPAPGGAPGLGLRE RPDRCHPGGDDRGPLHRSFG/SPSELSSRRPGPPGLPGLQGP PAPGLPQSRTL/PVLCVCDLSPAQCDINCCDPDCSSVDFSVFS ACSVFVVTGDSQFCSQKAVIYSLNFTANPPQRFELVDQINPSI FCIHITN*NLHYPLLIQKYL/NENNFDTLMKTSDGFTLNAESY VSFTTKLDIPTAAKYEGVPLQTSDFSFLRFPSSLTSSLCCTDNNP AAFLVNQAVKCTRKINLEQCEEIEALSMAFYSSPHILRVDPGRK KVPITVQSIQSLNKTILTRREDTDLVQPTLVNAGHFSLCVNV LEVKYSITVTDAGEVTKADLSFVLGTVSSVVVPLQQKFIEHFLQ ENTQPVPLSGNPGYVVGPLAAGFQPHKSGGIIQTNNRYGQITI LHSTTEQDCLALEGVRTPVLFGYTMQSGCKLRLTGALPCQLVAQ KVKSLWQGQFPDYVAPFGNSQGP/ADMLDWVPIHFITQSFNRK DSCQLPGALVIEVKWKYGSLLNPOAKIVNVTANLISSSFPEAN SGNERTILISTAVTFVDVSAPAEAGFRAPPAINARLPNFFFPF V |

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|------------|--|--|--|
| 5888 | 375 | 2302 | ILCRTPGVAMQRADSEQPSKRPRCDSPRTPSNTPSAEADWSPG LELHPDYKTWGPQVCSFLRRGGFEFVLLKNIRENEITGALLP CLDES RFENLGVSSLGERKKLSYIQRVQIHVDITMKVINDPIH GHIELHPLLVRIIDTPQFQRLRYIKQLGGGYVFPGASHNRFEH SLGVGYLAGCLVHALGEKQPELQISERDVLVCQIAGLCHDLGHH PFSHMF DGRFIPLARPEVKWTHEQGSVMFEHLINSNGIKPVME QYGLIPEEDICFIKEQIVGPLES PVEDSLWPYKGRPENKSFLYE IVSNKRNGIDVDKWDYFARDCHHLGIQNNFDYKRFIKFARVCEV DNELRICARDKEVGNLYDMFHTRNSLHRRAYQHKVGNIIDTMIT DAFLKADDYIEITGAGCKKYRISTAIDMEAYTKLTDNIFLEIL YSTDPKLDAREILKQIEYRNLFKYVGETQPTGQIKIKREDYBS LPKEVASAKPKVLDVVKLKAEDFIVDVINMDYGMQEKNPIDHVS FYCKTAPNRAIRITKNQVSQLLP\EFKAEQ\LIRVYCKKVDRKS LYA\ARQYFVQW\CADR\NFT\KPDGRGY*PPTP*HPQKKGW\ NDSTFSPKIPTRLPRLPKSRV\QLFKDDPM |
| 5889 | 1831 | 731 | LPAACGRPV TARPRQAPEGRSGRPRDLDPYPPQVFPDRVAI VTGGTDGIGYSTAKHLARLGMHVI IAGNND SKAKQVVS KIKEET LNDKET*VLLCCPGWLCWNSDPPTSASRGAGTTGVHHHFLK FGIFIL\DLASMTSIRQFVQKFKMKKIPLHVLINNAGVMVVPQR KTRDGFEEHFGNLNLGHFLLTNLLD TLKESGSPGHSARVVTVS SATHYVAELNMDLQSSACYS PHAAYAQSKLALVLFYHLQRL AEGSHVTANVDPGVVNTDLYKHVFWATRLAKKLLGWLLFKTP DEGAWTSIYAAVTPELEGVGGRYLYNKKETKSLHVTYNQKLQQQ LWSKSCMTGVLDVTL |
| 5890 | 1322 | 200 | FRGWSAAGRAVPVAFCSRISASSPRRPRGAVRLQSGTEAACRS GRDPDRPASAAGGHAGERMSQRD TLVHLFAGGCGGTVGAILTCP LEVVKTRLQSSSVTLYISEVQLNTMAGASVNRVVS PGPLHCLKV ILEKEGPRSLFRGLGPNLVGVAPSRAIYFAAYSNCCKEKLNDVFD PDSTQVHMSAAMAGFTAI TATNPIWLIKTRLQL*/SQGTAGKR RMGA FECVRKVYQTDGLKGFYRGMSASYAGISETV IHFVIYESI KQKLLEYKTASTMENDEESVKEASDFVGMMLAAATSK\LVATTI AYPHEVVTRTLREEGTKYRSFFQTL SLLVQEEGYGSLYRGLTTH LVRQIP\NTAIMMATYELVVYLLNG |
| 5891 | 1322 | 200 | FRGWSAAGRAVPVAFCSRISASSPRRPRGAVRLQSGTEAACRS GRDPDRPASAAGGHAGERMSQRD TLVHLFAGGCGGTVGAILTCP LEVVKTRLQSSSVTLYISEVQLNTMAGASVNRVVS PGPLHCLKV ILEKEGPRSLFRGLGPNLVGVAPSRAIYFAAYSNCCKEKLNDVFD PDSTQVHMSAAMAGFTAI TATNPIWLIKTRLQL*/SQGTAGKR RMGA FECVRKVYQTDGLKGFYRGMSASYAGISETV IHFVIYESI KQKLLEYKTASTMENDEESVKEASDFVGMMLAAATSK\LVATTI AYPHEVVTRTLREEGTKYRSFFQTL SLLVQEEGYGSLYRGLTTH LVRQIP\NTAIMMATYELVVYLLNG |
| 5892 | 1764 | 379 | VVLRVCGRLSVNSAVSSRTGGWSAGLT CAMQRLQVVLGHLRGP DSGWMPQAAPCLSGAPHASAADVVVHGRRTAICRAGRGGFKDT TPDELLSAVMTAVLKD VNL RPEQLGDICVGNVLQPGAGAIMARI AQFLSDIPETVPLSTVNRQCSGLQAVASAGGIRNGSYDIGMA CGVESMSLADRGNGNITSRLMEKEKARDCLIPMGITSENVAER FGISREKQDTFALASQQAARAQSKGCFQABIVPVT TTVHDDKG TKRSITVTQDEGIRPSTTMEGLAKLKPAFKKG DSTTAGNSSQVS DGAAILLARRSKAELGLPILGVLSYAVVGVPPDIMGIGPAY AIPVALQKAGLTVSDVDIFEINE\AFASQAAYCEKLRLLPP*EG *TPLGASGP*GHPLGLHWGHVQVITLAQ*S*SARGKRAYRSGC PCAIGSWNGSPLPVFEYPWGT |
| 5893 | 3 | 1653 | ILSKRRQCQAKTELMAKKVAVIGAGVSGLISLXCCVDEGLEPT CFPERTEDIGGVWRFKENVEDGRASIYQSVVTNTSKEMSCFSDFP MPEDFPN FLHNSKLL EYFRIFAKKFDLLKYIQFQITVLSVRKCP DFSSSGQWKVVTSNGKEQSAVFDAVMVCSGHHILPHIPLKSPF GMEFRKGQYFHSRQYKHPDGFEGKRILVIGMGNLGS DIAVELSK NAAQVFISTRHGTWVMSRISE DGYPDVSVFHTFRSMLRNLVPR TAVKWMIEQQMNRWFNHNENVCLEPQNKYIMKEPVLNDDVPSRL CGAIKVKSTVKELTETS AIFEDGTVEENIDV IIFATGYSFSFPF |

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|------------|--|--|--|
| | | | LEDSLKKVENNMVSLYKYIFPAHLDKSTLACIGLIQPLGSIFPT AELQARWVTRVFKGLCSLPSERTMMMDI IKRNEKRIDLFGESQS QTLQTNVVDYLDLALALEIGAKPDFCSLLFKDPKLAVALRYLFGPCN SY*YRLVGPGQWEGARNAIFTQKQRIKPLKTRALKDSSNFSVS FLKILGLLAVVVAFF\CQLQWS |
| 5894 | 174 | 1673 | RYSPLKVLQNKESLKLGMATALVSAHSLAPLNLKKEGLRVVRE DHYSTWEQGFKLQCNKGLGCEPLCKQFRQLRYEETGPREALS RLRELCCQLQPEHTKHEHLELLVLEQFLIILPKELQARVQEH HPESREDVVVLEDLQDLGETGQQVDPDQPKQKILVEEMAPL KGVQEQQVRHECEVTKEPEKEGEETRIENGKLIIVTDS CGRVES SGKISEPMEAHNEGSNLERHQAKPKKEIEYKCSEREQRFIQHLD LIEHASTHTGKKLCESDVCSSSLTGHHKVL*ERKVIQC\HGV LGKAFQRSSHLVRHQKHLGKEKPYQCNECGKVFSONAGLLEHLR IHTGKPYLCIHCGKNFRSSHLNRHQRIHSQEEPCBCKECCGKT FSQALLLTHHQRIHSHSKSHQCNECGKAFSLTSDLIRHHRHTG EKPKFCNICQKAFRLNSHLAQHVRIHNEKPYQCSECGEAFRQR SGLFQHQRYHHKDKLA |
| 5895 | 2967 | 86 | HPSLLGAIPFYPPSSPWPPLLYLFWNSHRKSRHFINQRGHGE MRLEFVSDGVPGLFVLAAAGRARGRAEVLISTVGPEDCVVPFLT RPKVPVLQLDGSGNYLFSTSAICRYFF\LLSGWEQDDL TNQWLEW EATELQPTLSAALYYL\VVQGGK\EDVLGSVRRTLTHIDHSL RQ\NCPFLAGETESLADIVLWALYPLLDQPAYLPEELSALHSW FQTLSTQ\EPQR\AARLVLKQ\QGVLAAL\PYLQKQPPQSPA EGKGLSPIEPPEEELATLSEEEIAMAVTAWEGLESPLPRLPQQ NPVLPVAGERNVLITSALPYVNNVPHLGNIGCVLSADVARYS RLRQWNTLYLCGTDEYGTATETKAL\EEGLTPQECIDKYHIHA DIY\RFWNISFDIFGRTPPQ\TKIT\QDIFQQLKRGFVLQD TVEQLRCEHCARF\LADRFVEGVCPFCGYEEARGDQCDKCGKLI NAVELKKPQCKVCRSCPVVQSSQHLFLDLPKLEKRLKEEWLGRITL PGSDWTNPAQFIPTFFGFREWPSPKPRNQ*TRDLK\WGNPGTP*E GFEDK\VFYVWFDATIGYLSITANYTDQWERWW\KNPEQVDLYQ FM\AKDNVFPFHSVFPSSALGAEDNYTL\VSHLIATEYLYNEDG K\FSKSRGVGVFRDM\AHD TGIPPDISRFYL\LYIRPEGK\DSA FSWTDLLKNN\ELNLLGNFINRA\GMFVSKFFGG\YVPEMV LTPDDQRLLA\HVTLELQHYHQ\LLEKVRIRDALRSILTIS\RH GNQYI\QVNEPW\KRIKGEADRQAGTVTGLAVNIAALLSVML QPYMPTVSATIAQLQLPPACSI LLTNFLCTL PAGHQIGTVSP LFQKLENDQIESLRQRFGGGQAKTSPKPAVVETVTAKPQIQIA LMDEVTKQGNIVRELKAKQKADKNEVAEVAKLDDKKQLAFAEG KPEAPKGGKKK |
| 5896 | 2967 | 86 | HPSLLGAIPFYPPSSPWPPLLYLFWNSHRKSRHFINQRGHGE MRLEFVSDGVPGLFVLAAAGRARGRAEVLISTVGPEDCVVPFLT RPKVPVLQLDGSGNYLFSTSAICRYFF\LLSGWEQDDL TNQWLEW EATELQPTLSAALYYL\VVQGGK\EDVLGSVRRTLTHIDHSL RQ\NCPFLAGETESLADIVLWALYPLLDQPAYLPEELSALHSW FQTLSTQ\EPQR\AARLVLKQ\QGVLAAL\PYLQKQPPQSPA EGKGLSPIEPPEEELATLSEEEIAMAVTAWEGLESPLPRLPQQ NPVLPVAGERNVLITSALPYVNNVPHLGNIGCVLSADVARYS RLRQWNTLYLCGTDEYGTATETKAL\EEGLTPQECIDKYHIHA DIY\RFWNISFDIFGRTPPQ\TKIT\QDIFQQLKRGFVLQD TVEQLRCEHCARF\LADRFVEGVCPFCGYEEARGDQCDKCGKLI NAVELKKPQCKVCRSCPVVQSSQHLFLDLPKLEKRLKEEWLGRITL PGSDWTNPAQFIPTFFGFREWPSPKPRNQ*TRDLK\WGNPGTP*E GFEDK\VFYVWFDATIGYLSITANYTDQWERWW\KNPEQVDLYQ FM\AKDNVFPFHSVFPSSALGAEDNYTL\VSHLIATEYLYNEDG K\FSKSRGVGVFRDM\AHD TGIPPDISRFYL\LYIRPEGK\DSA FSWTDLLKNN\ELNLLGNFINRA\GMFVSKFFGG\YVPEMV LTPDDQRLLA\HVTLELQHYHQ\LLEKVRIRDALRSILTIS\RH GNQYI\QVNEPW\KRIKGEADRQAGTVTGLAVNIAALLSVML QPYMPTVSATIAQLQLPPACSI LLTNFLCTL PAGHQIGTVSP LFQKLENDQIESLRQRFGGGQAKTSPKPAVVETVTAKPQIQIA |

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|------------|--|--|---|
| | | | LMDEVTKQGNIVRELKAQKADKNEVAEVAKLDDLKQLAVAEG KPPEAPKGKKKK |
| 5897 | 2967 | 86 | <p>HPSLLGAI PFYPPSSPWPPPLYLFWNSHRKSRHFINQRCIHGE MRLFVSDGVPGLPVLAAAGRAEVLSTVGPEDCVVPFLT RPKVPVLQDLSGNLSTSAICRYFF\LLSGWEQDDL TNQWLEW EATELQPTLSAALYYL\VVQGGKG\EDVLGSVRRTLTIDHSL RQ\NCPFLAGETESLADIVLWGALYPLLQDPAYLPEELSALHSW FQTLSTQ\EPQQR\AARRLVLKQ\QGVLA LR\PYLQKQPQPSPA EGKGLSPIEPEEEELATLSEEEIAMAVTAWEGLESPLPLRPQQ NPVLPVAGERNVLITSALPYVNNVPHLGNIIGCVLSADV FARYS RLRQWNTLYLCGTDEYGTATETKAL\EEGLTPQEICDKYHIIHA DIY\RWFNISFDIFGRITTPQQ\TKIT\QDIFQQLKRGFVLQD TVEQLRCEHCARF\LA DRFVEGVCPFCGYEEARGDQCDKCGKLI NAVELKKPQCKVCRSCPVVQSSQHLFLDLPLKLEKRL EEWLGR TL PGSDWTPNAQFITPFFGFREWPSKPRWQ*TRDLK\WGNPGTE*E GFEDK\VFYVWFDATIGYLSITANYTDQWERWW\KNPEQVDLYQ FM\AKDNVPFHS LVFPSSALGAEDNYTL\VSHLIATEYLYNVEDG K\FSKSRGVGVFRDM\AHD TGIPPDISR FYL\LYIRPEGK\DSA FSWTDLLLKNNS\ELLNNLGNFINRA\GMFVSKFFGG\YVPEMV LTPDDQRLLA\HVTLELQHYHQ\LLEKVRIRDALRSILTIS\RH GNQYI\QVNEPW\KRIKGSEADRQRAGT VTGLAVNIAALLSVML QPYMPTVSATIQAQLQLPPPACSI LLTNFLCTLPAGHQIGTVSP LFQKLENDQIESLRQRFGGGQAKTSPKPAV VETVTAKPQQIQ A LMDEVTKQGNIVRELKAQKADKNEVAEVAKLDDLKQLAVAEG KPPEAPKGKKKK</p> |
| 5898 | 2967 | 86 | <p>HPSLLGAI PFYPPSSPWPPPLYLFWNSHRKSRHFINQRCIHGE MRLFVSDGVPGLPVLAAAGRAEVLSTVGPEDCVVPFLT RPKVPVLQDLSGNLSTSAICRYFF\LLSGWEQDDL TNQWLEW EATELQPTLSAALYYL\VVQGGKG\EDVLGSVRRTLTIDHSL RQ\NCPFLAGETESLADIVLWGALYPLLQDPAYLPEELSALHSW FQTLSTQ\EPQQR\AARRLVLKQ\QGVLA LR\PYLQKQPQPSPA EGKGLSPIEPEEEELATLSEEEIAMAVTAWEGLESPLPLRPQQ NPVLPVAGERNVLITSALPYVNNVPHLGNIIGCVLSADV FARYS RLRQWNTLYLCGTDEYGTATETKAL\EEGLTPQEICDKYHIIHA DIY\RWFNISFDIFGRITTPQQ\TKIT\QDIFQQLKRGFVLQD TVEQLRCEHCARF\LA DRFVEGVCPFCGYEEARGDQCDKCGKLI NAVELKKPQCKVCRSCPVVQSSQHLFLDLPLKLEKRL EEWLGR TL PGSDWTPNAQFITPFFGFREWPSKPRWQ*TRDLK\WGNPGTE*E GFEDK\VFYVWFDATIGYLSITANYTDQWERWW\KNPEQVDLYQ FM\AKDNVPFHS LVFPSSALGAEDNYTL\VSHLIATEYLYNVEDG K\FSKSRGVGVFRDM\AHD TGIPPDISR FYL\LYIRPEGK\DSA FSWTDLLLKNNS\ELLNNLGNFINRA\GMFVSKFFGG\YVPEMV LTPDDQRLLA\HVTLELQHYHQ\LLEKVRIRDALRSILTIS\RH GNQYI\QVNEPW\KRIKGSEADRQRAGT VTGLAVNIAALLSVML QPYMPTVSATIQAQLQLPPPACSI LLTNFLCTLPAGHQIGTVSP LFQKLENDQIESLRQRFGGGQAKTSPKPAV VETVTAKPQQIQ A LMDEVTKQGNIVRELKAQKADKNEVAEVAKLDDLKQLAVAEG KPPEAPKGKKKK</p> |
| 5899 | 326 | 1078 | <p>NCPKSKEPENGVRAPSLSPFLRAAMALSDVDVKKQIKHMAFTEQ EANEKAEIDAKAE EEFNIEKGR LVQTQRLKIMEYEEKKEKQIE QKKIILMSTMRNQARLKVLRANDLISDLLSEAKRLSRIVEDP EVYQGLLDKLVLOGLLRLLLEPVMIVRCRP\QD LLLVEAAVOKAI PEYMTISQKHVEV\QIDKEA*LAVECSWEVWEVYSGNQRIKVS N TLESRLDL SAKQKMP EIRMA LFGANTNRKFFI</p> |
| 5900 | 64 | 1409 | <p>KAA SRDSCLEFCFLCGVSSHDLQHRMWHRLSHLSRLQD LK GGVIYPALPQPNFKSLPLAVHWHHTASKSLTCAWQHEDHFEL KYANTVMREFDYVWLRDHCRSASCYNSXTHQRS LDTASVDLCIKP KTIRLDETTLFFTWPDGHVTKYDLNWLKNSYEGQKQKVIQPRI LWNAEIIYQAAQVPSVDCQS FLETNEGLKKFLQNFLLYGIAFVEN VPPTQEHTEKLAERISLIRETIYGRMWYFTSDFS RGD TAYTKLA LDRHTD TTYFQEP CGIQVFHCLKHEGTGGR TLLVDG FYAAEQVL</p> |

WO 01/53312

PCT/US00/34263

| SEQ ID NO: | Predicted beginning nucleotide location corresponding to first amino acid residue of amino acid sequence | Predicted end nucleotide location corresponding to first amino acid residue of amino acid sequence | Amino acid segment containing signal peptide (A=Alanine, C=Cysteine, D=Aspartic Acid, E= Glutamic Acid, F=Phenylalanine, G=Glycine, H=Histidine, I=Isoleucine, K=Lysine, L=Leucine, M=Methionine, N=Asparagine, P=Proline, Q=Glutamine, R=Arginine, S=Serine, T=Threonine, V=Valine, W=Tryptophan, Y=Tyrosine, X=Unknown, *=Stop Codon, /=possible nucleotide deletion, \=possible nucleotide insertion) |
|------------|--|--|---|
| | | | OKAPEEFELLSKSAI\KHEYIEDVGECHQPHDWDWAQS*ISTHG /YKELYLIRYNNYDRAVINTVPYDVVHRWYTAHRTLTIELRRPE NEFWVKLKPGRVLFIDNWRVLHGREGCTFGYRQLCGCYLTRDDVL NTARLLGLQA |
| 5901 | 1 | 2121 | VAIEQTSCLKMMQAVGGAPARPTGEYICNQCQAKYTSLSFSQTHL KTHLDTVLTKLPQCCKEFPNQESLLKHVTIHFMITSTYIICE SCDKQFTSVDDLOKHLDMHTFVFFRCTLCQRFVDSKVSIIQLHL \AVKHSNEKKVYRCTSCNWDNRNETDQLHLVKNHLENQGVKHK CIFCGESFGTEVELQCHITTHSKKYNCKFCSKAFHAIILLEKHL REKHCVFETKTPNCGTNGASEQVQKEEVELQTLTNSQESHNSH DGSEEDVDTSSEPMYGCIDCGAAYTMETLLQNHQLRDHNIRPGES AIVKKKAELIKGNYKCNVCSRTFFSENGLRHEHMQTHLGPVKHYM CPICGERFPSSLTLTEHKVTHSKSLDTGNCRIKCMPLQSEEBFL EHCQMHPLRLNSLTGFRVCVCMQTVTSTLELKIHGTFHMQKTGN GSAVQTTGRGQHVQKLYKCAKCLKEFRSKQDLVKLDINGLPVGL CAGCVNLSKASASPGINVPPTNRPGLGQENENLSAIEGKGVGGL KTRCS*LATFKF*VLKVELPEPH*PKFHRGVRPDSNSTQLKTP QVSPMPRISPSQSDEKKTYQCIKCMVFYNEWDIQVHVANHMID EGLNHECKLCSQTFDSPAKLQCHLIEHSFEGMGGTFCPCVCFIV FVQANKLQQHIFSAHQEDKIYDCTQCPQKFFQTEBLQNHMTMQ HSS |
| 5902 | 712 | 209 | LKNRRSRPSIRCSIGSTSVSRWLTSLFTYLDHTADVQ*V*REF IPLKPRQ*ED*MFQSWLHAWGDTLEEAPEQCAMAMFGYMTDTGT VEPLQTVETQGGDLQSLFLHFLDEWLYKFSADFFIP\GWGE EFSLSKHPQGTVEKAITYSAMQVYNEENPEVFIIDI |
| 5903 | 2106 | 735 | DTPGPSLPSTTAPPSLRSLSPSRPSYLLPGDPQPLQGRGLPTT PALFALSAPVGGGAASPMPPSGRLPLLLPLWLLVLTTPGRPAA GLSTCKTIDMELVKRKRIBAIRQILSKRLASPPSQGEVPPGP LPFAVLALYNSTRDRVAGESAEPEPEPEADYAKEVTRVLMVET HNEIYDKFKQSTHSIYMFNTSELREAVPEPVLLSRAELRLRL KLKVEQHVELYQKYSNNSWRYLSNRLAPSDSPWLSFDVTGVV RQWLSRGGEIEGFRLSAHCSCDSRDNTLQVDINGFTTGR\RGDL ATIHGMNRPFLLLMATPLERAQHLQS\SRHRQAL\DTNY\CFSF GGRNCLRC/VHC*HLIFRKDL\GW\XWI\HE\PKGYHANFC\L GPCPYIWSLDTQYSKVLALYNQ\HKPG\ASAAP\CCVPQALEP\ LPVYYY\VGRKPKVEQLSNMIVRSCKCS |
| 5904 | 3 | 1126 | MMEETNAINTFKBEQRLIYEELIKEEKTNNELSAISRKIDTW ALGNSETKAFRAISSKVPVDKVTPTLPEEVLDFEKLQQTGG RQGAWDYDHQNFVKVRNKHGKPTFMEEVLEHLPGKTQDEVQQ HEKWKYQKFLALEERKKESIQWKTKKQKREIFLKEKADNTP VLFHNKQEDNQKQKEEQRKKQLAVEAWKKQKSIEMSMKASQL KEEBEKEKKHQKERQRQFKLKLLESYTTQKKKEEFLRLKEEI REKAKEAEKRKNAADEISRQERDLHKLELKILDRQAKEDEKSO KQRRRLAKLKEKVENNVSRDPSRLY/NTHQRLGRTNQKDRTNRLW ATSTYPT*GYSNLETRNTEKSMR |
| 5905 | 287 | 2912 | MASFPPRVNEKEIVRLRTIGELLAPAFPDKKCGRENWTVAFAP DGSYFAWSQGHRTVKLPVWSQCLQNFLHGTKNVTNSSSLRLP R QNSDGGQKQKPREHIDCGDIVWSLAFGSSVFEKQSRVCNIEWH RFRFGQDQLLATGLNSGRIKIWDVYTGKLLNLVDHTGVVRDL TPAFDGSLILVSASRDKTLRVWDLRDDGN\MMKVLRGHQNWVY\ SCAPSPDSSMLCSVGASKAVVAAILV*LRLCWHHSHTGATMVLS WAERVASLATGLGATFTIG*SNLAFVLQGVLYVHRCWSMSTFCF SFPLFFFFKVISPTVKYH*LLSKLIPQFYIGISLTSETNLM*SI WLSNGFSVLFFGILSDSRDILRL*FNLKFVLIFF*K*CIWSVQK KKKPKRIALLQBERLS*DKPPSSILI*QTEVNIRILFRAILHS* LLIFRI*NCI*YTS*IIDPFYIQMTYDRG*FGKNKMVKF*FIEM *LYYFHKIAFSPCNV*HPCCLPKKPHLAVNILFACISCFSS*A QVGDPSLL*TSYDLKGRQWNNLLTLRFLSVYFFKNLVVSGKK REGGL*YLTFLISVYFS*LVFGINGQYSFVVKLHCLYPMFRILI FKLTFNRNI*NRICMSALINLKTDFNLMTLSIFFKLLIYNA* YNLN*I*QF*YKMFVLCMSE*SYNICLFIAGF\LWNMDKYTM |